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## INVESTMENT, PRICES, BUDGET AND FINANCE

### FIXED CAPITAL DEPRECIATION NORMS REVISION UNDERWAY

#### Service Life and Amortization

Moscow FINANSY SSSR in Russian No 6, Jun 86 pp 26-30

[Article by A.B. Masalskiy and A.I. Ryzhov under the rubric "Finances and the Acceleration of Scientific-Technical Progress": "Service Life of Fixed Capital and Amortization" (As a means of posing a question.)]

[Text] The presently existing norms of amortization deductions for fixed capital were introduced on 1 January 1975. In the elapsed period of time, certain corrections were introduced into them in connection with changes in conditions of production, operation and the creation of new kinds of fixed capital.

In accordance with the decree of the USSR Council of Ministers "On Developing New Norms of Amortization Deductions for Fixed Capital of the USSR National Economy," a new general revision was specified of norms of amortization deductions with their establishment solely for full restoration of fixed capital. Working out of normative fixed-capital service life was planned. This is very important for the determination of amortization-deduction norms. For this reason it would be advisable to study the method of determining normative fixed-capital service life.

One of the main tasks of working out operative norms has been the determination of an economically practicable service life for fixed capital. In our opinion, this task has been unduly complicated. It should not be reduced to the determination of an economically practicable service life but to the determination of normative service life (the amortization period) which without amendments and corrections should be made the basis of determination of amortization-deduction norms for complete restoration of fixed capital.

We should clearly differentiate the periodicity of determination of economically practicable service life and normative service life. The first, in our view, needs to be worked out for the latest kinds of fixed capital and revised on the basis of constantly operating capital, inasmuch as long-term equipment balances and reequipment plans of sectors and production operations should be based on economically practicable service life. (1) The latter are needed only at the time of working out deduction norms, sometimes refining them for individual groups of fixed capital.

In accordance with the 1970 Methodological Instructions of Gosplan USSR, the amortization-deduction norm for full restoration of fixed capital as a rule is determined in percent of their restoration cost according to the formula:

$$N_v = \frac{V - L}{V \times A_p} \times 100 \%,$$

where

- $N_v$  is the amortization-deduction norm for the full restoration of fixed capital;
- $V$  is the restoration cost of the fixed capital;
- $L$  is the liquidation cost of the fixed capital defined as the difference between the proceeds from sale of the equipment and the cost of the work of dismantling it;
- $A_p$  is the amortization period.

As can be seen from the presented formula, the parts comprising it are the fixed-capital cost, its liquidation cost and the amortization period. However, for all practical purposes the liquidation cost constitutes such a small amount with respect to the restoration cost that in preparing the existing scheme of operative amortization norms, most ministries and departments do not take it into account. As a result of this the presented formula was significantly simplified and the determination of the amortization norm for the full restoration of fixed capital actually was reduced to the determination of the service life (economically practicable or normative).

In the economic literature, some authors consider as identical the terms "economically practicable" and "normative service life."

For example, V.A. Vorotilov believes that "validation of economic service life should be based on a consideration of the dynamics of the economic effect of machines, the formed and constantly changing level of socially necessary labor outlays for the manufacture of products as well as the possibilities of replacing obsolete equipment predetermining the equipment balance," while "the attempt to validate equipment economic service life without taking into account the concrete possibilities of the equipment park... is unrealistic." (2) In the opinion of D.M. Palterovich, "Actual economically rational service life should be determined while taking into account the equipment balance, that is, limitation in regard to the equipment balance and with respect to capital investment needs to be directly introduced into the model for determining rational equipment service life." But in the 1970 Methodological Instructions for Working Out Amortization Deduction Norms, it directly points out that "economically practicable service life in distinction to actual service life characterizing the length of operational use of tools of labor represents the amortization period, that is, the normative service life of fixed capital." This point of view is also held by P.R. Filippov. He writes: "Reimbursement time of fixed-capital cost (the amortization period) should directly lie at the basis of development

of amortization norms as they are economically practicable time periods for reimbursement of tools of labor and take into account not only physical wear but also obsolescence." (4)

In the given case, the two different terms--economically practicable service life (or rational service life) and normative service life (or the amortization period)--are improperly considered as being identical, from our point of view.

We think that those economists are more correct who believe that in the determination of amortization deduction norms the economically rational service life of machines and equipment should serve only as the basis of normative periods. In the future, there will be required "correction of economically rational service life while taking into consideration the possibilities of pertinent of pertinent-corresponding machine-building sectors." (5) But in general, development of amortization-deduction norms, should the normative service life be determined in two stages--first in the economically practicable and then in the normative? Hardly. From our point of view, in general elaboration (or refinement) of amortization norms, only the normative service life of fixed capital should be determined. It would appear that the economically practicable (or rational) service life is the period of productive functioning of tools of labor in the course of which they produce an economic effect. At the same time, calculation of such periods should be based on the principles of determination of economic effectiveness of capital investment and introduction of new equipment. In this case, a necessary condition of determining rational service life is attainment of a maximum effect with minimum outlays.

Normative service life (or amortization period) is that interval of time which is established for the productive functioning of means of labor on the basis of the concrete conditions of their reproduction and operation. It has a number of limitations: durability (physical wear), material and financial possibilities of securing a replacement, the operational condition of the equipment and so on. Normative service life can coincide with an economically practicable period only in the event where the latter fully satisfies all conditions made on the normative period. As a rule, this does not happen in practice. For example, a significant barrier to the economically practicable periods becoming the normative is the limited nature of the prospects of machine-building enterprises of providing machinery and equipment for the replacement of physically worn and obsolete equipment.

An analysis conducted by the authors of the results of an inventory of the stock on 1 December 1983 showed that a significant share of fixed capital whose normative service life has expired is being used in the national economy. Moreover, the initial cost of this capital has been carried over in its entirety to newly created products or services.

Such a situation occurred as the result of the inadequate capabilities of machine building to satisfy in a timely way the requirements for machinery and equipment needed for replacement. In this connection, the practicability of bringing up the normative service life of tools of labor to economically rational ones is doubtful at the present time.

In connection with the introduction on 1 January 1975 of amortization deduction norms, the normative service life for all types of fixed capital was significantly reduced (Table 1).

Undoubtedly, reduction of the service life of fixed capital is a progressive tendency. The new types of means of labor created under the influence of scientific and technical progress have greater efficiency, in which connection they displace machinery, equipment, transmission gear, transport equipment and the like, reducing thereby their actual service life. Furthermore, reduction of normative service life (or raising of amortization norms to full restoration) is one of the ways of reducing losses from the elimination of not fully amortized fixed capital.

In our view, those economists are right who consider that raising amortization norms is rational only in those cases where it is practicable to secure for a growing amortization fund a corresponding increase in the production volume of new equipment, including the possibility of expanding its importation. We cannot but agree with this point of view, since an unrealistically short normative service life creates only a financial rather than a material basis for reproduction of fixed capital. Normative life, which is lower than the real (or actual) life at the present time, results in undesirable "reamortization" of fixed capital and consequently in increased production cost.

Table 1

Types of fixed capital	Averaged normative service life (in years)		
	used until 1975	introduced in 1975	% of reduction
For the national economy as a whole (less residential buildings)	25.3	22.1	12.6
Including:			
buildings (nonresidential)	62.9	49.3	21.6
structures	40.7	38.2	6.4
transmission gear	32.8	26.2	20.1
machinery and equipment	14.4	12.2	15.3
including:			
power machines and equipment	19.0	17.5	7.9
material working machines and equipment	13.3	11.2	15.8
computing equipment	19.1	11.5	39.8
transport equipment	18.1	16.2	10.5
tools	8.4	6.3	25.0
perennial plantings	37.7	30.8	18.3
miscellaneous fixed capital	18.6	16.3	12.4



Some economists suggest making the normative service life of tools of labor dependent on expenditures on capital repairs. Thus it was proposed to introduce a "strict limit to the correlation between expenditures and capital repairs during the course of the normative life and the total balance value of fixed capital according to which the total amount of outlays on capital repairs (and possibly on current repairs) for the normative life should not exceed 60-75 percent of the initial cost" (6) of certain fixed-capital groups.

In this connection, let us turn to facts. The amortization norms that went into effect on 1 January 1975 contain 1,248 group norms for one of the types of fixed capital--machines and equipment. Normative expenditures on capital repair of machinery and equipment for their average normative service life exceed initial cost for 100 groups, including for 12 of the 59 groups of power machines and equipment, for 180 of 1,101 groups of material working machines and equipment and for 7 of 47 groups of measuring and regulating instruments and devices and laboratory equipment. The biggest relative share of the groups of material working machines and equipment for which normative expenditures on capital repairs for the average normative service life exceed their initial cost belongs to ferrous and nonferrous metallurgy.

In our opinion, it is not normative service life that should influence production and distribution of equipment, but the other way around: normative service life should be established on the basis of machine building's potentialities for production of needed equipment. If we were to consider that the production programs of machine-building enterprises are based on long-term plans for the development of the national economy, then the volume and rate of production of tools of labor should determine the normative life of their functioning.

The method of validating amortization norms (normative service life) should be significantly simplified. It is necessary to reduce the number of factors considered in working out the service life of fixed capital and to select from them one or two main ones. For the purpose of determining normative service life, it would be useful to utilize the following scheme, which consists of five stages.

The first stage provides for collection of data for acts of writing off (liquidation) and for machines and equipment--the results of the inventory of 1 December 1983 on actual service life of inventoried items. The second is determination on the basis of data on actual service life of individual inventoried items of averaged actual service life for a given group of capital. The third is determination on the basis of the equipment certification (or of experts) of the service life of new types of machines and equipment included in the designated groups which were put into operation relatively recently and for which no write-off was made. The fourth is determination for a given group of fixed capital on the basis of data obtained from a preliminary normative service life. The fifth stage is determination on the basis of a preliminary normative service life and balance of equipment of the normative service life of fixed capital which will be directly included in the formula for the amortization norm for full restoration. Thus, normative life is determined by two main indicators--actual service life of fixed capital and long-term equipment balance.

In essence, such a method of basing normative service life excludes the possibility of taking into account fixed capital obsolescence in amortization norms. Such accounting is inexpedient for the following reasons.

If we were to consider obsolescence of tools of labor as the result of technical progress in the sphere of their production, any manifestation of this progress would be accompanied by society's production of an economic effect. At the same time it is connected with certain losses which are expressed in the form of not completely amortized cost of operating means of labor that are retired as a consequence of their replacement by more efficient models. The question is when and with what source should these losses be covered--amortization credited in the present or profit obtained in the future. Assuming the point of view of adherents of inclusion of obsolescence in amortization norms, it becomes possible to reach a conclusion on the advantageousness of covering unamortized value in the future with amortization credited at the present time on the basis of clearly artificially high norms aiming for the appearance of more efficient equipment within a certain period. And what if it does not appear? Does it make sense to annually raise production cost by artificially increasing the amortization fund? Apparently not. Moreover, amortization norms are in effect for a limited time. For this reason accounting of obsolescence in these norms leads only to an artificial raising of production costs and deepening of disproportion between financial resources earmarked for reproduction of fixed capital and material compensation.

Since technical progress in the field of production of tools of labor results in the end in its boosted efficiency and reduced public costs of production, then possible losses from underamortization should be covered (the same as expenditures on new equipment) more economically through reduction of production cost as a consequence of replacement of old with new equipment. This is in complete agreement with the principles of determination of the economic effectiveness of capital investment and introduction of new equipment.

The solution of the problem of "underamortization" and "overamortization" of fixed capital being retired is directly connected to the correct determination of normative service life. According to the Methodological Instructions for Revision of Norms of Amortization Deductions (1970), norms of amortization deductions are grouped and include capital with differing service life. Deviation of the service life of concrete items from the average for a certain fixed-capital group was permitted within 15-20 percent limits. In this connection, amortization deductions for full restoration of withdrawn (liquidated) fixed capital can be assessed above their initial cost or underassessed. Under these conditions, the process of "underamortization" and "overamortization" is lawful from our point of view, and a limit in the amount of 20 percent of the initial cost of liquidated fixed capital is a permissible limit of "underamortization" or "overamortization."

Let us examine the dynamics of losses from liquidation of not fully amortized fixed capital (Table 2).

Table 2 (in percent of initial cost)

	1970	1975	1980	1984
For the national economy as a whole	23.7	19.6	15.2	9.4
Including:				
industry	27.3	23.5	18.7	11.2
agriculture	11.7	7.1	6.9	5.3
transport	24.3	17.7	13.7	7.7
communications	25.2	20.9	19.5	11.7
trade	20.3	19.2	11.7	9.5
municipal enterprises	32.7	31.3	24.7	14.8
contracting construction and installation organizations	16.1	14.6	10.2	4.4

It can be seen from the cited data that the relative size of losses from liquidation of not fully amortized fixed capital is reduced both for the national economy as a whole and also for individual sectors. On the basis of analysis of the dynamics of losses from liquidation of not completely amortized fixed capital for 1970-1984, it is possible to assume that the relative share of underamortization of liquidated fixed capital in terms of their initial cost will be reduced in the future.

The elimination or reduction of losses from liquidation of not fully amortized fixed capital is possible through reduction of normative service life. However, at enterprises and economic organizations, an additional return will appear without delay from excessively computed amortization for full restoration of fixed capital.

To resolve this problem, it would be possible to agree to cessation of assessment of amortization for this purpose after complete transference of the initial cost to the newly created products or services. But in the preparation of existing amortization deduction norms and the Statute on Planning Procedure and Use of Amortization Deductions in the National Economy, this proposal was not adopted due to complication of planning amortization deductions, production cost and profit as well as of accounting. Moreover, the introduction of the stated procedure will not contribute to the creation of a personal interest on the part of enterprises and economic organizations in replacing old with new equipment that is more efficient. But it is also possible to reduce "underamortization" or "overamortization" by diminishing the permissible limits of deviation of the service life of different items from the average for a specific group of fixed capital (up to 10-14 percent), that is, by further differentiation of the norms of amortization deductions, which would bring about an increase in their number.

At the present time, due to the absence of accounting data and statistical reporting, there is no possibility of answering the question as to what the end results of using amortization deduction norms for complete restoration of fixed capital are or, in other words, what process predominates--"underamortization" or "overamortization." It is quite possible that

balancing the sum of losses from liquidation of not fully amortized fixed capital and amortization unduly assessed above its initial cost presents an insignificant value. In this case the problem will be settled.

#### FOOTNOTES

1. In this article, only the aspect of the economic practicability of using fixed capital is examined, that is, that interval of time during which it produces an economic effect.
2. "Sroki sluzhby i normy amortizatsii osnovnykh fondov v promyshlennosti" [Service Life and Amortization Norms of Fixed Capital in Industry].-- Moscow, Ekonomika, 1974, p 7.
3. "Methods and Practice of Determining the Effectiveness of Capital Investment and New Equipment."--Sbornik nauchnoy informatsii [Collection of Scientific Information]. Issue 22--Moscow, Nauka, 1972, p 63.
4. Filippov, P.R., "Novyye normy amortizatsii" [New Norms of Amortization].-- Moscow, Izd-vo ekonomicheskoy literatury, 1963, p 13.
5. Senchagov, V.K., Ostapenko, V.V. and Miliyaev, V.A., "Amortizatsionny fond v usloviyakh intensifikatsii proizvodstva" [The Amortization Fund Under Conditions of Production Intensification].
6. Khmelevskiy, N., "Directions and Principles of Revising Amortization Norms."--PLANOVOYE KHOZYAYSTVO, No 8, 1970, p 18.

#### Amortization Deduction Norms

Moscow PLANOVOYE KHOZYAYSTVO in Russian No 8, Aug 86 pp 93-97

[Article by M. Zavalishchin under the rubric "Problems of Scientific-Technical Progress": "Amortization Deduction Norms: Tasks and Problems"]

[Text] For the purpose of bringing the existing system of amortization into accord with the requirements of scientific and technical progress, the creation of economic conditions for acceleration of renewal of fixed capital and curtailment of expenditures for carrying out its capital repair, the decree of the USSR Council of Ministers of 13 August 1985 "On Working Out New Amortization Deductions Norms for Fixed Capital of the USSR National Economy" provides for working out and putting into operation new amortization deduction norms as of 1 January 1988.

The need of working them out is due to the fact that the existing system of amortization does not fully make provision for renewal of production potential.



As a result of the implementation of a tremendous construction program, fixed capital--the most important component of the country's national wealth--has been growing at a fast rate. Thus over the past 9 years, from the time of putting into operation the presently existing amortization deduction norms (1975-1983), all of the country's fixed capital has grown (in comparable prices) by 927 billion rubles, or 79.6 percent. In this period, production fixed capital grew from 741 billion rubles to 1,403 billion rubles, or by 89.3 percent.

At the same time, the coefficient of retirement of industrial production fixed capital decreased from 1.6 percent in 1975 to 1.3 percent in 1984, and the coefficient of fixed-capital renewal became smaller. According to our calculations, actual service life (calculated on the basis of actual retirement and growth rate) of fixed production capital in 1983 for the production sphere as a whole was higher than normative by 8-9 percent. Consequently, existing amortization norms both for industry as a whole and for individual ministries and departments are not fully in accord with the objective of accelerating replacement of physically worn and obsolescent machines and equipment. The amount of amortization computed in 1984 for industrial production according to our calculations amounted to 7.87 percent of the cost of capital, including amortization for full restoration--4.85 percent of the average annual value of industrial production fixed capital. This average developed norm of amortization deductions for renovation corresponds to an average normative service life for capital of 20-21 years.

In the case of present demands on the rate of scientific and technical progress, such normative service life of means of labor is manifestly excessive, and amortization deduction norms for full restoration are set too low.

At the same time, for many kinds of fixed capital retired from operation because of age and wear, there are available considerable sums of underassessment of amortization for their full restoration. In 1984, for retired capital for industry for which amortization was underassessed, they amounted to 11.2 percent of its cost. The state of affairs is the same in other sectors of the national economy.

In addition, the annual amount of amortization deductions for capital repair is not completely used up for its designated purpose. As a result, their balance, listed on special and current accounts of enterprises and organizations, has been growing from year to year and by the end of 1983 amounted for industry to more than 17.8 percent of the annual sum of deductions allotted for partial restoration of fixed capital. A comparable situation is also observed in other sectors of the national economy. The exceeding of the amortization deductions for capital repair over the need for them does not promote their economical expenditure.

One of the basic causes of defects in the use of amortization deductions is the tendency for extensive reproduction of fixed capital, primarily machinery and equipment. Production associations and enterprises weakly utilize the

possibilities of acquiring new equipment with amortization deductions designated for capital repair. In 1983, only 1.7 percent of this money was used in industry in this way.

At the present stage of economic development and for the long term, the role of amortization deductions will grow. They have to be adequate for financing accelerated replacement of physically worn and obsolescent equipment and expanding the scale of reequipment and modernization of existing enterprises, which presupposes a revision of existing norms of amortization deductions. At the same time, a number of methodological questions are raised.

We know that existing amortization norms were developed on the basis of restorative cost formed after the reevaluation of fixed capital carried out as of 1 January 1972. This reevaluation of fixed capital eliminated the difference in assessment of the value of capital of old and of new enterprises (that went into operation after 1 January 1972) and thus created a unified value base for the development of presently operative amortization norms.

In the revision of these norms, reevaluation of fixed capital is not provided for. Consequently for the purpose of creating equal cost-accounting conditions for all enterprises and economic organizations, amortization norms and norms of outlays for repair should be worked out on the basis of the present value of fixed capital, that is, while taking into account the new wholesale prices introduced on 1 January 1982 for industrial products and the transition on 1 January 1983 to new estimate norms and prices in construction.

For the fixed capital of enterprises and economic organizations that went into operation before 1 January 1984, there should be worked out for amortization norms for full restoration of fixed capital and for norms of expenditure for its repair corresponding corrective coefficients, which would contribute to equalizing the cost-accounting conditions for "old" and for "new" capital. In working out corrective coefficients, it is necessary to revise existing ones or work out a new unified classification of fixed capital, inasmuch as the cost of fixed capital of enterprises and economic organizations going into operation after 1 January 1984 is significantly higher than the cost of capital for enterprises of the same type started up before this time period. Consequently, the former group of enterprises will create (without the use of corrective coefficients) a fixed-capital repair fund of a smaller size than the latter, although the need of repair money is considerably greater for them. This inevitably will have a negative effect on the cost-accounting work of enterprises. The development of corrective coefficients in the given case will make it possible to eliminate unfounded differences in calculating amortization for fixed capital of the same type.

For the new amortization deduction norms and repair-expenditure norms to correspond to the tasks of further strengthening cost accounting and the requirements of scientific and technical progress, they should take into account changes in the operational conditions of production capital occurring under the influence of technical progress. Besides, it is necessary for the new norms to provide the state reimbursement of the full cost of fixed capital

in economically practicable time periods. And, finally, they need to take into account changes in the conditions of conducting repair work and their economic practicability.

Various points of view exist on the question of a procedure for establishing new norms. Specifically, some economists propose to develop averaged norms as a whole for all the buildings, structures, machinery and equipment, transport equipment and so forth and to determine the size of amortization deductions for them. In our opinion, the adoption of this proposal would not contribute to the timely and full reimbursement of the cost of worn out means of labor inasmuch as amortization deductions will in this case be made over the course of a long time without taking into account changes in the composition and structure of fixed capital as a whole for an enterprise, association or ministry. In addition, enterprises and organizations would be deprived of the possibility of correctly determining the amount of wear for the fixed capital being operated. In the end, this will have a negative effect on the quality of planning reproduction of the means of labor.

Constant improvement of equipment and technology inevitably leads to growth in the efficiency of produced tools of labor, to a relative change in their cost and to the reduction of the service life of machinery, other equipment and other forms of the active part of fixed capital. By service life of concrete types of tools of labor is meant the period of time in the course of which they operate in production in accordance with their original purpose. There also are such concepts as actual and normative service life of capital.

The real time periods of equipment in operation are considered actual, while the time of use of capital employed as initial data in determining amortization deduction norms for full restoration of fixed capital and the size of expenditures for its capital repair is normative.

Normative service life is an objectively determined length of time in wear of means of labor that takes into account their physical aging and obsolescence. Amortization norms for renovation as measures of annual wear, based on this service life, are one of the tools of planning reproduction of fixed capital. They are calculated on the basis of economically valid (rational) service life of concrete type of tools of labor. For this reason, it is very important in determination of optimal sizes of norms of amortization deductions and consequently creation of financial resources for the acceleration of replacement of physically old and obsolete equipment to correctly determine an economically valid normative service life for concrete type or groups of fixed capital. The determination of economically practicable new service life for machines and equipment and other tools of labor is a rather complex task, inasmuch as a multiplicity of various means of labor and in addition the service life of each type of capital depend on a number of factors.

Specifically, in determining the normative service life of individual types (inventory items) and groups of active and passive parts of fixed capital, there must be taken into account:

the durability of machines and equipment, their actual age and potential service life, with account being taken of intensiveness of their use;

the tempi of scientific and technical progress and time periods of creation and introduction of new models of equipment into production;

balances of production and distribution of machines and equipment over the long term and the real possibilities stemming from them of replacement of worn out and obsolete machines and equipment with new, more efficient machines and equipment;

an economically practicable volume of expenditures (for capital and current repairs) for maintaining fixed capital in an operating state.

We think that the new normative service life of funds and amortization norms for renovation should be determined while taking into consideration the totality of the above-enumerated and other factors, inasmuch as all of them (to a greater or lesser degree) exert an influence on the service life of buildings, structures, machinery, equipment, transport equipment and other types of fixed capital.

In determination of the economic practicability of repair work and development of norms of expenditures on carrying them out, there should be taken into account the designated normative service life of capital, the periodicity of conducting capital repairs and their cost (including modernization) for the entire normative service life and its influence on production cost and efficiency of production. In those cases where, after performance of capital repair work, operational expenditures are not reduced, it would be economically impracticable to perform the repair work in the future.

Inasmuch as the size of outlays on the repair of any kind of machines or equipment over the course of their normative service life directly depends on this period, while the economically based normative service life is determined to a significant degree by taking into account the effectiveness of carrying out a certain number of repairs, that is, it depends on the size of outlays for the entire normative service life, work would appear feasible on determining the normative service life and norms of outlays on repair of fixed capital to be carried out simultaneously and in coordination. This undoubtedly would contribute to boosting the quality of preparation of amortization norms and outlay norms for repairs.

At the same time, it should be noted that the practice of using amortization deductions for renovation shows that in itself raising amortization norms--the creation of additional financial resources without a corresponding provision of them with material and manpower resources--cannot lead to accelerating replacement of physical worn and obsolete machines, equipment and other capital. The procedure presently in operation of determining the size of capital investment and its distribution by types of reproduction (reequipment, reconstruction and others) inadequately takes into account normative service life and the age composition of fixed capital, especially of machinery and equipment that is in operation, as well as the degree of their physical wear and obsolescence.



For this reason it would seem advantageous for planning organs of ministries and departments when determining the size of capital investment and its distribution by enterprises and associations to give first priority in plans of reequipment and reconstruction to replacement of physically worn and obsolete machinery and equipment with new more progressive equipment, making it possible to improve quality of production output, to reduce its production cost and to raise the operational efficiency of enterprises and organizations.

At the same time, it would be desirable to significantly expand the list of industrial products (subsequently included under fixed capital) on whose basis USSR Gosplan compiles long-term balances of production and distribution. This will make it possible to improve the proportionality between production and consumption and to more closely link normative service life to the real possibility of replacing physical worn and obsolete machines and equipment.

The question of utilizing resources designated for financing capital repair is very important from the point of view of strengthening cost accounting. The presently existing system of distributing them outright results in some enterprises and organizations including amortization deductions under production cost while others, which have received these funds free of charge, utilize them for covering the repair costs of their fixed capital without them being reflected in production costs and operational results.

In our opinion, such a manner of using monetary funds designated for the repair of fixed capital contradicts the fundamental principles of cost accounting and weakens the responsibility of heads of enterprises for their economical expenditure.

At the same time, the personal interest of enterprises and organizations in preservation of fixed capital is reduced, the stimulus for economical accomplishment of repair work is undermined and an atmosphere of dependency is created. Enterprises rationally utilizing fixed capital and economizing funds in carrying out their capital repair work do not have the possibility of using released funds for other needs. Some enterprises, which do not show due concern for the preservation of machinery and equipment and tolerate uneconomical expenditure of funds in performance of repair work, receive funds free of charge from other enterprises and in some cases assign them for covering their mismanagement.

In the interest of strengthening cost accounting at associations and enterprises, it would be advisable to establish the principle of repayment in borrowing (redistributing) funds intended for repair work. At the same time, the practice of bank credit extension for capital-repair expenditures should be significantly expanded.

The pressing question remains on the manner of determining the size of losses of underamortization of liquidated fixed capital and their reflection in accounting and reporting. At the present time, losses from liquidation of not fully amortized fixed capital (except for residential buildings and other kinds of fixed capital for which amortization for full restoration is not computed as well as from liquidated fixed capital in connection with reconstruction of enterprises and cities carried out in accordance with the

decisions of the USSR Council of Ministers and union-republic councils of ministers) applies to the results of economic activity of production associations, enterprises and economic organizations with the exception of those cases where replacement of equipment is done in accordance with plans for bringing in new equipment. An excessively assessed amount of amortization for renovation for some capital does not balance an insufficiently paid sum from other funds.

Taking into consideration that norms of amortization deductions are basically of the group kind (these groups include funds with varying service life with a deviation from average life of plus or minus 15 percent), it would be useful to establish a procedure in which losses connected with incomplete amortization of some types of means of labor are reduced by the amount of excessively assessed amortization for other retired forms of capital, and the already balanced sum of losses should be ascribed to the results of enterprises' economic activity. The establishment of such a procedure would contribute to strengthening cost accounting and speeding up replacement of obsolete machinery and equipment.

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## INVESTMENT, PRICES, BUDGET, AND FINANCE

### ECONOMISTS PONDER PRICE MANAGEMENT UNDER ECONOMIC REFORM

#### Prices and Finances

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[Article by I.K. Salimzhanov, doctor of economic sciences, and V.N. Alpeyev, candidate of economic sciences: "The Problems of the Interaction Between Wholesale Prices and Finances Under the New Conditions"]

[Text] The economy's conversion to the intensive strategy of development requires more intensive interaction among all the components of the economic mechanism so as to guarantee that they operate more fully toward increasing production efficiency. Improvement of the interaction between financial indicators and prices occupies an important place in improvement of the economic mechanism. In the present stage of the socialist economy prices and finances, as the forms in which commodity-money relations are manifested, are actively used for planned management of socialist production, and they perform general and specific functions.

Their general function consists above all of guided interaction in the formation and distribution of society's net income. The stimulating function of finances and prices is also characterized by very close interrelationship. For instance, consumption of particular consumer goods is stimulated or restricted by changing retail prices, and this has a substantial impact on the size of financial resources. Here a rise of retail prices, as experience has shown, can also bring about a reduction of the inflow of turnover tax revenues into the state budget, while a reduction can increase those revenues.

Wholesale prices are used to stimulate expansion of the production of progressive products through the mechanism of the distribution of profit. The higher price which is taken into account in drawing up the plan for volume indicators does not have such a stimulative effect; that effect is manifested through the growth of profit left at the disposition of associations and enterprises under the normative method of profit distribution, and also through the application of higher rates of deductions to incentive funds from the profit obtained from incentive supplements to wholesale prices. Under present conditions a greater compatibility is required between the functions of finances and prices; their joint effect toward intensification of production on the basis of scientific-technical progress needs to be strengthened.

Aside from their general functions with other elements of the economic mechanism, prices also have their specific functions which arise from their economic nature. As communist society is built, the price is transformed more and more from the money expression of value to a planned standard of the inputs of social labor per unit output. Prices are used to calculate economic indicators (the volume of production, profit, and so on), and they have a vigorous influence on their dynamic behavior. In a socialist economy they perform simultaneously the function of recording inputs of labor and also the function of stimulating the growth or reducing the output of particular products and services. But the planned changing of prices cannot be the regulator of production. These functions of the economic mechanism are performed more effectively through direct command planning of the volume of output of specific products, and this is done by USSR Gosplan, USSR Gossnab, and ministries and departments, taking into account the requests which enterprises have submitted to acquire particular products.

The centralized planning of physical proportions, as the experience of building socialism has shown, guarantees fuller satisfaction of production and personal requirements in proportion to their significance to the national economy. In accordance with operation of the law of value, regulation of the volume of output requires that wholesale prices of progressive new products take into account the full volume of capital investments necessary to increase their production. At the same time this causes a rise of the price level for these products, it detracts from the efficiency of their use in the sphere of consumption, and it holds back the widespread dissemination of the advances of scientific-technical progress. Low prices on outdated articles, on the other hand, create incentives for their consumption.

As calculations of wholesale prices are made at the present time, the production cost and profit do not fully reflect the costs of reproduction of manpower and various types of natural resources, since if the present profit distribution system is retained, the general price level would have to be raised in order to take these costs into account. In the economics literature the opinion is rather widely held that the stimulative effect of prices toward speeding up scientific-technical progress is manifested most fully when the stability of price list prices is maintained over the entire period of production of particular products and also when the price per unit of performance characteristics or useful benefit is kept equal or lowered.

In reality the stability of list prices is not a mandatory condition for long-term economic rates of formation of wage funds and economic incentive funds to have an impact on the intensification of production. More effective management of scientific-technical progress is achieved when wholesale prices are changed both for the manufacturer and for consumers according to conditions known in advance. This is the direction now being taken by the practice of planned pricing; incentive supplements and reductions from wholesale prices which are a function of the technical level and quality of the product are being used ever more widely. The additional costs or saving of consumer enterprises are the economic basis of the supplements and reductions applied to wholesale prices for product quality, the quality product-mix, and the technical level of products.



The specific nature of the interaction of the categories of the plan and the price in the context of directly social production and the existence of commodity-money relations predetermines the diversity of approaches to taking into account a future saving in prices and the financial indicators of the plan. Only that saving which causes a reduction of inputs of social labor at the moment of the product's consumption can be reflected through prices in targeted indicators. That kind of saving would include reduction of the specific input of physical and fuel-energy resources per unit output. This saving or overconsumption is taken into account in the system of supplements and reductions applied to prices for deviation from the base level of the performance characteristics of the product. The average level of the supplements and reductions is taken into account both in the plan and also in the report of the enterprises which are the manufacturers.

If the saving for consumers is realized over a period of several years, then its reflection in the indicators of the plan for commodity output, net output, and profit will indicate that in the given year the manufacturing enterprises must create a product whose output affords a real saving for consumers only within the specific period. A saving of this kind would include the economic benefit from instruments of labor and structural materials as well as the useful benefit from a number of semidurable and durable consumer goods. That is why we cannot agree with the opinion of those economists who deem it indispensable to include the indicator of the economic benefit as part of the physical volume of output in the form of so-called invariable prices, that take into account the performance characteristics, since the practical realization of such proposals upsets the unity of physical and value proportions in socialist expanded reproduction.

The Basic Directions for the Economic and Social Development of the USSR Over the Period of 1986-1990 and up to the Year 2000 note the necessity of achieving economically and socially sound price relations for various groups of commodities and of reflecting more fully in retail prices and rate schedules the quality and performance characteristics of products and services. Improvement of the pricing of consumer goods by broadening the rights of associations and enterprises to set temporary and negotiated prices for goods of improved quality represents a sizable potential for augmenting financial resources. The experiment conducted since 1984 in the RSFSR garment industry in which enterprises and associations were granted the right to independently set temporary retail prices on new products has been yielding constructive results. The output of products bearing the code letter "N" rose 157.6 percent in the first half of 1984 as compared to the same period of 1983. At the same time budget revenues resulting from the total amount of temporary supplements increased substantially. Whereas in the first half of 1983 the budget received 26.8 percent of the total amount of these supplements, over that same period of 1984 it received 37.9 percent; when the comparison is made for bonus resources, the figures are 14.9 and 12.9 percent. The additional profit of enterprises was 58.2 and 49.2 percent. While the total amount of temporary supplements increased 127.6 percent, the growth of deductions paid into the budget was 179.8 percent.

Thus in the context of the experiment economically sound proportions were maintained: the output sold at the temporary prices increased more rapidly than the sum total of temporary supplements, but more slowly than the deductions paid into the budget. The broadening of the rights of enterprises in the pricing area gives them greater interest in the rise of temporary retail prices. For example, in the associations of Mosshveyprom, which under the conditions of the experiment were granted the right to independently set temporary retail prices, the relative share of the temporary supplements dropped from 5 to 10 percent [sic] of the price, while the share of supplements increased from 15 to 30 percent of the price, i.e., within the limits of the maximum proportions. That is why it seems advisable to establish a scale of deductions paid into the state budget from the sum total of temporary supplements in such a way as to guarantee that the deductions paid into the budget increase faster than the average proportion of the supplements. This will prevent enterprises from increasing the proportion of the temporary supplements relative to the retail prices in a way detrimental to the interests of consumers.

The broadening of the rights of associations and enterprises to set prices of consumer goods must guarantee improved balance of physical and value proportions. The setting of negotiated prices on the first lots of goods and on particularly fashionable articles by agreement between industrial enterprises and organizations in the trade sector will speed up the sale of consumer goods. Articles on which the negotiated prices are set are developed in accordance with promising directions of fashion and as a rule are sold in a few days. The motivation of industrial enterprises to manufacture goods bearing the code letter "D" is achieved by a special profit distribution procedure in which 50 percent of the additional profit remains at the enterprise, and 30 percent of its total amount goes for incentives to the workers who have taken part in creating, organizing the production, and manufacturing these products, while 70 percent goes into the fund for social welfare and cultural programs and housing construction.

In spite of the favorable economic conditions, the output of goods bearing temporary and negotiated prices does not exceed 10 percent of the total volume of output even at advanced enterprises. The principal reason why the low share of production of high-quality products is being maintained lies in the absence of the necessary materials and equipment to manufacture them. Another reason why the production of these goods has not expanded sufficiently is the instability in determining the proportion of bonuses. For instance, in the Moscow Production Association for Manufacturing Knitted Outerwear approximately 100 rubles are allocated per worker who participated in manufacturing these products for the awarding of bonuses for the production of products sold at negotiated prices, while in the "Moskva" Garment Production Association the figure is approximately 11 rubles.

These cases indicate the advisability of a further improvement of the bonus system. It is now allowed to establish the rates of transfers to the material incentive fund of associations and enterprises for manufacturing new commodities of improved quality on the basis of labor intensiveness, the complexity and scale of production of the particular products, and production associations

are also permitted to transfer to enterprises cooperating with them in this production up to 5 percent of the proceeds from sales of goods of improved quality for the purpose of supplemental material incentives.

The distribution of materials and equipment for the planned volume of production requires stability of the wholesale price level and the orientation of those prices toward average inputs of labor so that the rates for allocation of resources do not depend on the dynamic behavior of wholesale prices. Under those conditions assignments for increasing production efficiency are broken down to enterprises in the form of the indicator of production cost reduction (cost per ruble of output), which depends on a saving against anticipated fixed expenses, from a change in the composition of output, and also in the form of indicators of reduction of standard rates of inputs of resources in physical terms. In the latter case, for example, the saving on metal in tons relative to the volume of output of machinebuilding in value terms incompletely reflects the rise of efficiency, since metal differing in quality and price is used. Acceleration of scientific-technical progress necessitates changes in methods of planned distribution of resources. Beginning in 1986 associations and enterprises will themselves determine requirements for specific equipment needed to update capital assets on the basis of the size of the production development fund and credit resources placed at their disposition. Changes in the makeup of equipment bring about changes in the makeup of materials used and ultimately in the sectoral structure of the economy. The use of new materials requires in turn that changes be made in the production technology and causes certain shifts in the proportional composition of the stock of equipment. The new conditions for the conduct of economic activity should be taken into account in the establishment of price relations between new materials and those which have been produced traditionally. To be specific, beginning in 1986 the bank will pay 0.5 percent per annum for use of the resources of the production development fund of associations and enterprises. Should the resources of that fund be insufficient, USSR Stroybank and USSR Gosbank will extend them credits to cover planned outlays assuming a rate of return within the limits of the assigned standards for the branch even over and above the limit of state capital investments provided the outlays are repaid (taking into account the specific nature of sectors) over a period not to exceed 5 years. Thus each consumer's decision on what is more advantageous: to keep the resources of the production development fund in the bank and to obtain interest on them or to introduce material-saving technology on a scale presupposing use of credit and exceeding the limit of capital investments--will depend on the relation in wholesale prices between the emerging new materials and the traditional materials. During the 12th Five-Year Plan it would be advisable to make an experimental test in changing wholesale prices of interchangeable structural and building materials in connection with the emergence and initial production of progressive new materials, without adjusting planning targets for financial and value indicators.

The setting of wholesale prices on new materials at the level of prices reflecting the socially necessary costs has paramount importance to correct determination of the effectiveness of the use of credit. The initial costs in manufacturing new basic and auxiliary materials as compared to the costs of production already organized are considerably higher as a rule than, say, for new machines, equipment, and devices. The reason for this is that a new

technology and new production capacities are also started up in the process of organizing the production of a material. If wholesale prices are set at the level that affords an economic motivation to produce new materials, then their level will not guarantee sufficient effectiveness of replacement of traditional materials by consumers. It thus becomes obvious that there must be compensation of the difference between the total initial production cost and standard profit on the one hand, and the wholesale price of the new material set according to the costs of the ongoing production on the other, and this would be charged to the sectoral financial resources, above all the unified fund for development of science and technology.

In our view the compensation might also come from a rise of wholesale prices on the traditional materials in order to restrict their consumption and achieve their replacement by the new ones. It would be advisable to calculate the price increases on the basis of the balance of production and consumption of the new and traditional materials, the volume of their output and coefficients of technological interchangeability so as to take into account that as the output of the traditional materials drops off, the same funds will go into the state budget at stable rates of profit distribution as occurred at the lower wholesale prices.

The proposal to change wholesale prices without adjusting the indicators of the plan and the long-term assigned economic rates might arouse the following objections: first, the manufacturers of the traditional materials would realize undeserved profit as a result of the higher prices and a corresponding incentive; second, those consumers who could not use the new materials for technical reasons would incur an unjustified loss. It would seem that under the new conditions of economic activity, which have gone through a test in the framework of the large-scale economic experiment, especially in the "AvtoVAZ" Association and the Sumy Machinebuilding NPO imeni M.V. Frunze, production collectives are becoming increasingly motivated to reduce materials intensiveness and production cost. Consequently, the demand for physical resources in requests will also drop off. If the rise of wholesale prices is in advance distributed proportionately among consumers, requests submitted to supply authorities for the traditional materials will inevitably drop off, since consumers will be forced to work out measures for their conservation so as to fulfill the plan for production cost and profit. The volume of output of the traditional materials will also decrease correspondingly. Changing wholesale prices of raw materials and supplies which are consumed without taking into account their change in the plan and in long-term economic norms would tend to enhance the accountability of the entire collective for selection of the material-saving direction of scientific-technical progress, since assuming the normative method of forming the wage fund, this will have an effect on the money income of all the workers. In other words, whereas up until the present time intensification was achieved in the following sequence: allocation of resources and equipment--targets for conservation of physical and labor resources--evaluation of their fulfillment in physical and value terms, the proposed scheme would take on a different appearance: targets for conservation of resources in the form of price indexes--requests for equipment paid for with the enterprises' own resources and credit--the change of prices--evaluation of the saving on resources through the indicator of the profit remaining



to the enterprises. An important condition for timely drafting of plans for the change of technology, for the updating and modernization of equipment, for use of the resources of the production development fund and for obtaining credit for these purposes is that the indices of the change of wholesale prices be distributed among consumers of the product in good time.

Along with the application of new materials and fuller use of secondary resources, application of highly efficient new equipment in the national economy and its extensive use is becoming an extremely important direction of scientific-technical progress. Strengthening the motivation of consumers to make use of it is related to the substantiation of levels of limit prices and wholesale prices on new machines, equipment, and devices.

The methods of pricing that apply to advanced technology have to a considerable extent taken shape in that period when most instruments of labor went into fitting out new construction projects. The level of prices of equipment, since it was made part of cost estimates, was also taken into account in forming the level of costs and prices of the products to be produced by the newly built enterprises. Since the principal success indicator for consumers was the growth of the volume of production, they were mainly interested that prices not increase per unit of productivity. The application of resource-saving equipment and technology became disadvantageous if the rise of prices of instruments of labor exceeded the rise of their productivity. The output-capital ratio indicator calculated against commodity output instead of net output also stood in the way of application of technology that saved on labor, raw materials, fuel, and supplies. The low level of observance of contract discipline, failure to meet delivery deadlines, have unquestionably had their impact on the direction of the stimulative effect of the price. Principal attention was paid to using the price level to motivate manufacturers to update their product and not allow a drop of value indicators in connection with organizing the production of new technology.

The situation at the present time is different. First, the requests for equipment to replace existing equipment must be met on a priority basis. Second, performance of delivery contracts and reduction of production cost have been elevated among the most important success indicators. Third, the broadening of rights of enterprises in disposition of their financial resources is making it possible for them to independently choose the most optimum ways for increasing production efficiency.

The application of progressive technology is organically bound up with selection among alternatives, quick reaction to what is new, and interest in the final result. To that end steps should be taken to strengthen the impact which consumers have on the technical level and quality of the product and to radically improve pricing. One of the possible ways of practical fulfillment of these requirements consists of rejecting the well-known principle: the larger the benefit, the higher the product's price and profitability. It makes sense to make a gradual transition to pricing new technology on the principle: the more effective a product is in the sphere of consumption, the lower its price should be both relative to the benefit and also relative to current production costs.

Broader use needs to be made of various special funds (YeFRNT, FRP [unified fund for developing science and technology, production development fund]) and credit to offset losses in the volume of production, profit, and other indicators related to the transition to manufacturing a new product. As for creation of more favorable conditions for the development of enterprises manufacturing advanced technology, those ends must above all be served by such a reliable economic instrument as the incentive supplement to the wholesale price of highly efficient new products certified in the superior-quality category, which has been verified by business practice. It would be advisable to set wholesale prices of products with low efficiency at a level where their consumption would become a losing proposition regardless of the profitability for the producer. It has to be taken into account that obsolescent technology is produced not only because it is advantageous to the manufacturer. This technology becomes part of new construction and reconstruction projects because of its low price per unit productivity. In addition, when projects are being substantiated, they must also take into account such factors as more stable supply of production of products which have been produced for a long time and consequently a lower risk that delivery deadlines will not be met as well as a better supply of spare parts to them and the certainty of the reliability and durability characteristics.

Requests for obsolescent technology go to supply authorities and are distributed among manufacturers in the form of the assignments of the products-list plan without any participation on their part. Halting the production of such products takes a considerable time, even if progressive new equipment has been developed to replace them. As a rule the new product and the old product are manufactured side by side. The point is not just that because of the low production cost of the existing product compared to the price accepted in the substantiation the enterprise preserves its volume of profit and revenues paid into the budget. The obsolescent product is manufactured alongside the new one, since contracts have been concluded for delivery of the physical resources necessary for its production. The system of deductions from wholesale prices which was introduced beginning in 1986 orients associations and enterprises toward removing products from production which have not been certified in the superior-quality category for 3 years and in certain cases over a period of 5 years. There is full economic justification for these periods of time if we take into account that manufacturers must send requests for raw materials, supplies, intermediate products, and components to supply authorities a year or 2 before the product is produced. Suppliers of materials must also request in advance the raw materials and other components they need. Even given the present forms of supply, not to mention wholesale trade or competitions for the right to manufacture expensive products, the very possibility that there might not be requests for obsolescent products could force manufacturers to switch to manufacturing the new one. If at a certain price an article is excessively profitable, but it is known in advance that it cannot be sold, then there is no point in requesting the raw materials, supplies, and components to produce it.

Thus to halt the production of obsolescent technology in time, the demand in the form of requests first needs to be eliminated so as to prevent the chain reaction of requests for the physical resources needed to produce it. Taking

into account that the manufacturer and consumer bear equal accountability before society for requesting and manufacturing inefficient products, along with the deductions, it would also make sense to introduce for producers a supplement to wholesale prices for consumers that would act as a disincentive, and the entire amount of such supplements would be paid into the budget. This is altogether justified from an economic standpoint, since the operation of obsolescent equipment inflicts losses on the national economy as a whole, while the supplement to the price must offset and reimburse that loss at the expense of the particular parties responsible. If enterprises know that oversights in selection of equipment at the time when plans are being drawn up for retooling and reconstruction of production will have to be paid for out of their own funds, the number of requests for that type of technology which will be obsolete by the time it is put into operation must fall off appreciably.

Broadening the rights of associations to use the resources of the unified fund for development of science and technology, especially in the area of compensating higher costs in the period of putting a new product into production, has great importance to stimulating organization of the production of up-to-date technology. In practice the resources of the YeFRNT, which are centralized in ministries, are allocated mainly to finance R&D projects, including outlays to manufacture and test experimental prototypes. Up to now uniform principles as to methods have been lacking concerning the procedure for reimbursement of costs related to putting new products into production. It is obviously wise to reimburse not the outlays, but the losses to the total amount of balance-sheet profit in the first year of organizing the production of the new products insofar as those losses are related to reduction of output. Organizing the production of new technology should guarantee enterprises preservation of the profit level already achieved per quota-hour of labor intensiveness of the production program. For example, the labor intensiveness of a new product at the beginning of the year was planned at 1,100 quota-hours, and at the end of the year at 1,010 quota-hours, balance-sheet profit was 12 million rubles, and the labor intensiveness of the production program was 3 million quota-hours. The amount of compensation for reduction of profit per unit of the new product would be:  $(12:3) \cdot (1,100 - 1,010) = 360$  rubles. Along with the standard costs of preparing production, these resources should be included in the value of work to put new technology into production, which beginning in 1986 will be fully taken into account in the volume of sales of production associations and enterprises. Production collectives have been extended the right to cover outlays for those purposes not only with resources of the YeFRNT left at their disposition, but also out of the production development fund.

Recently the share of resources flowing into the material incentive fund from incentive supplements to wholesale prices has been dropping, and this has been adversely affecting the motivation of associations and enterprises to put new technology into production. In practice there is an evident trend toward increasing the share of the unified fund for development of science and technology in distribution of additional profit and also toward transferring a portion of the resources to the centralized funds of the ministries. By way of example we might give the figures for the "Bryansk Machinebuilding Plant imeni V.I. Lenin" Production Association. Between 1975 and 1983 the relative share of the material incentive fund in the total amount of distribution of additional profit obtained from incentive supplements to the wholesale prices of



products bearing the state Quality Emblem decreased there from 44 to 22.2 percent, i.e., by almost half. At the same time deductions to the YeFRNT increased from 15 to 35 percent, and deductions into centralized funds of the ministry from 4.2 to 10 percent. Much the same situation has also been observed for products to whose wholesale prices supplements were applied for economic efficiency. Between 1979 and 1982 the relative share of the material incentive fund in the total amount of additional profit obtained from these supplements dropped from 52.5 to 24 percent.

In the "Kran" Production Association the distribution of additional profit from incentive supplements to the wholesale price for products bearing the Quality Emblem and for economic efficiency was as follows in 1983: 15 percent to the state budget, 25 percent to the YeFRNT, 12 percent to the centralized fund of the ministries, 23 percent to collaborators, 6.8 percent to the fund for social welfare and cultural programs and housing construction, 2.6 percent to the production development fund, and 15.6 percent to the material incentive fund for the awarding of bonuses for creating, putting into production, and applying new technology. This means that only less than one-sixth of the additional profit from incentive supplements to wholesale prices actually has a direct stimulative effect on putting the highly efficient new product into production. The role of bonuses as an incentive is determined by their ratio to the base wage of workers, which must, as is well known, reflect the quality and quantity of work. But in certain worker categories, designers, for example, quality can be evaluated only according to the completed work (design), whose performance takes months and sometimes even years. Under these conditions wages can reflect only the worker's qualifications, and the bonus will serve by way of appraisal of the results of work. In order to increase the motivation for production of new technology, it has to be guaranteed that a certain proportion of bonuses are obtained as a function of the indicator of the economic benefit.

The dynamic behavior of economic incentive funds is determined to a considerable extent by deductions from the sum total of incentive supplements. This has been expressed especially vividly under the new procedure for formation of incentive funds at enterprises taking part in the economic experiment in 1984. For example, in the "Sibelektromotor" Production Association the material incentive fund increased 48.7 percent as against the plan; 29.8 percent of which came from incentive supplements to wholesale prices; in the "Bryansk Machinebuilding Plant" Production Association the respective figures were 65.5 percent and 46.8 percent; at the Gorokhovets Materials-Handling Equipment Plant they were 44.5 and 42 percent, respectively.

A similar situation has also been observed in connection with formation of the fund for social welfare and cultural programs and housing construction. For instance, at the Darasun Mining Equipment Plant this fund grew 4.8 percent in 1984 on the basis of fulfillment of the plan for the rise of labor productivity, and 19.1 percent because of deductions from incentive supplements to wholesale prices; in the "Bryansk Machinebuilding Plant" Production Association the respective figures were 5.2 and 63.6 percent.



The volume of output of products in the superior-quality category depends on the job orders issued for their delivery and the orders received to be filled. That is why the sum total of incentive supplements is not a factor that depends on the quality of performance of production collectives. The dynamic variation of this amount is determined to a considerable degree by the products-list plan and varies from year to year of the 5-year period. Incentive supplements are established for the period of time until the next regular certification of products, so that the amount of deductions to the incentive fund is determined not so much by the economic benefit of the new product that has been put into production in the current year as by the volume of orders for the product in the superior-quality category.

In order to enhance motivation to raise the technical level of the product it would be advisable during the 1st year, and in certain cases even the 2d, of a product's production to channel the entire amount of incentive supplements remaining after payments into the budget for the awarding of bonuses for developing the new product, for organizing its production, and for manufacturing it. In subsequent years it should be distributed in the customary procedure for balance-sheet profit. Beginning in 1985 incentive supplements have been distributed in the same way as balance-sheet profit in the Sumy Machinebuilding NPO imeni M.V. Frunze.

Incentives based not on the absolute proportion of the economic benefit, but on its relative level compared to other new products of similar purpose has very great importance to raising a product's technical level. That is why it would seem to make sense to differentiate the relation between bonuses and payments into the budget within the incentive supplement as a function of the product's technical level. Should there be a drop in the ratio of the benefit to the price from the average level for particular groups of products, the share of bonuses for manufacturers in the breakdown of the supplement should be reduced, and there should be an increase in the relative share of payments into the budget, while if it should increase, the former would be increased and the percentage of the payments into the budget would be decreased correspondingly.

Thus it would be wise if improvement of the interaction between pricing and finances in the area of stimulating the production of new technology were to pursue the following directions. First, link the size of the incentive supplements to the wholesale price over the period of organizing the production of the new product to the bonus paid to developers and manufacturers; second, distribute the supplement between the budget and the enterprise in proportion to the ratio of the benefit to the price as compared to the average level for related products; third, in the first years of the product's production commit the entire portion of the incentive supplement left at the enterprise to the awarding of bonuses, and in subsequent years distribute it in the general way. If this approach is taken to setting wholesale prices, incentive supplements, and deductions, constant updating of the product becomes a condition for obtaining bonuses, and differentiation of the size of bonuses and payments into the budget as a function of the economic benefit will stimulate improvement of the technical level and the product's quality.

## Pricing Problems Discussed

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[Interview with N.I. Chekhlov, member of the collegium and department chief of USSR Goskomtsen, and A.A. Deryabin, professor, doctor of economic sciences, and sector head of the Economics Institute of the USSR Academy of Sciences, by A.A. Simonyan, department editor of PLANOVOYE KHOZYAYSTVO: "Reflections on Prices"; date and place not given]

[Text] At the 27th party congress and at the June (1986) Plenum of the CPSU Central Committee particular attention was paid to the problems of improving pricing. "There is a need to speak about the key importance of pricing in development of economic methods of management. Many unsolved problems have accumulated here," (Footnote 1) (PRAVDA, 17 June 1986) M.S. Gorbachev noted in his speech at the plenum. N.I. Chekhlov, member of the collegium and department chief of USSR Goskomtsen, and A.A. Deryabin, sector head of the Economics Institute of the USSR Academy of Sciences, doctor of economic sciences, and professor, spoke about the content of the problems which have to be solved in this connection with A.A. Simonyan, department editor of PLANOVOYE KHOZYAYSTVO.

A. Simonyan: First of all about reflecting the surplus product in prices. This is one of the debatable problems that has received the least study. Various proposals have been made concerning it, some of them questionable from the scientific standpoint and unsuitable for practice. But what possibilities have not yet been used to substantiate effective methods of reflecting the surplus product in prices? As we know, the Marxist principle that value is not made up of individual structural elements, but breaks down into them, serves as the point of reference in solving this problem. This means that the surplus product must figure in prices as the difference between the price and the production cost, i.e., it would be a resultant quantity. At the same time the following should be taken into account: under the conditions of socialism the immediate basis of the price is a modified value. Moreover, the surplus product is redistributed not only among sectors and subsectors, but even among associations and enterprises.

N. Chekhlov: The problem of reflecting the surplus product in prices arises in three cases: in simultaneous price reviews, when prices are being set on a new product, and when prices of a product already produced are being revised because the conditions of its production and sale have changed and the product has become obsolescent.

The surplus product is determined not in proportion to costs, as some economists suppose, but is taken on the basis of the structure of the gross social product and the size of the national income and its distribution into accumulation and consumption. The total size of the surplus product is determined in the proportion that comes about at the moment when prices are being reviewed and also takes into account the increased scale of production, the rise of labor productivity, and the drop in the production cost. The total amount of the surplus product determined in this way in the form of profit and turnover tax on products for production and technical purposes pertains to productive assets. For example, at the point when prices are being reviewed, the

sum of profit, the turnover tax, and other fixed payments was 300 billion rubles, and the value of productive capital 1.5 trillion rubles. The standard rate of profitability was 20 percent, and that is also taken as the initial rate. It is differentiated from sector to sector as a function of the composition and rate of turnover of productive capital. On the basis of the sectoral standard rate of profitability and the size of productive capital the proportion of profit to be included in the prices of the products of the particular sector is established.

A. Deryabin: The determination of the standard rate of net income and level of profitability is usually explained by saying that the impact of prices on the economic performance of enterprises is achieved by means of the indicator of profit and profitability. But this applies to the standard rate which is to be included in the price of the particular article. Meanwhile it is important not only to establish the partial standard rates, but also to determine the national economic standard rate of net income, which is expected to reflect as accurately as possible the surplus product created in the sphere of physical production. The correspondence of the most general physical and value proportions depends on solving this problem. The direction taken by the dynamic behavior of the general price level is also affected by this.

Attempts to derive these standard rates from the relationship that has actually come about between the sum of profit and the turnover tax on the one hand and the costs of production or the summary value of productive capital on the other cannot be recognized as satisfactory.

The need for general price reviews, which has been mentioned, arises because of the uneven change of production costs from product to product. One of them becomes excessively profitable, while others are produced at a loss. This indirectly indicates a change of relations in the levels of socially necessary expenditures of labor to manufacture the unit of various use values. That is why there have to be appropriate shifts in price relations. But a review of wholesale prices for some definite period (for example, as of 1 July 1967 or as of 1 January 1982) does not individually affect basic physical and value proportions. In this case only their relation changes: either they come closer to the objectively necessary correspondence, or they move away from it. For instance, in general reviews of wholesale prices all types of prices necessary for the correct performance of all economic computations and to determine the effectiveness of any economic measures may move closer to a single level. But it is also possible that there might be a greater discrepancy in price levels if the standard rate of profitability used in setting wholesale prices does not accurately reflect the relations between the necessary product and the surplus product. In this case there is an inevitable lack of correspondence between physical and value proportions.

In reviews of wholesale prices the consumption fund (provided the wage fund and retail prices remain constant) will not decrease per kilogram of meat, nor per meter of fabric, just as the accumulation fund will not increase per machine tool or per ton of cement. Only its money expression changes. The relation between the necessary product and the surplus product remains as before, and for that reason nothing depends on the specific level of the profitability of the production of means of production. It does not matter whether

profitability is set at 125 percent of remuneration of labor, 10 percent of production cost, or 15 percent of productive capital, or in the respective proportions of 100 percent, 8 percent, and 12 percent, or, conversely, higher; neither the surplus product nor the necessary product will increase or decrease in real terms.

A different picture is observed if profitability in the production of consumer goods changes. Assuming an unchanged level of wages and a reduction of prices, the size of net income decreases, and conversely, a rise of prices when other conditions are equal causes a growth of net income. The relation between the accumulation fund and consumption fund will also change. To properly understand the problem we need to define straightforwardly the general or national economic standard profitability. At the same time if its real size, which more or less accurately reflects the relation between the necessary product and the surplus product, always figures as the relation between remuneration of labor and net income in Department II, then it is likely that this relationship must also extend to Department I.

N. Chekhlov: I agree with A.A. Deryabin that the price structure must reflect all the proportions of reproduction, the interrelationship of the price system. In practice pricing authorities strive to take this into account. But it is important to determine not only the lines of relationship, but also the quantitative relations and the absolute proportions. Scientific research has to be done in this direction.

A. Simonyan: But still, if the general standard profitability is determined for the industrial sector, then evidently sound standard rates also have to be established for the individual branches of industry?

N. Chekhlov: Reflection of profit in prices of the products of subsectors and product groups is more complicated in nature and is done with a variety of methods and so as to take into account the specific features of production. In one-product production net income is determined in proportion to productive capital, and when there are multiple products and difficulties arise in this connection in determining the specific capital intensiveness, net income is established in proportion to the full production cost taken as the basis of the price or the production cost after deduction of physical inputs (in manufacturing branches).

We should note that differences in methods of determining profitability at various levels result from considerations of a practical nature. They can be straightened out. The procedure that has evolved for formation of net income is in need of improvement and above all the development of scientifically sound methods of differentiating the standard rates of profitability as a function of the structure and turnover of productive capital. The mathematical formulas for computation, including the quantitative value of each factor here, have still not been found. That is why profitability has to be determined by computation relative to the production cost, thereby guaranteeing the enterprise the conditions for cost accounting (khozraschet). In price reviews average sectoral costs are taken into account, although the actual costs are formed not only under the influence of objective causes, but also as a



consequence of subjective factors: mistakes in conduct of economic activity, shortcomings in the organization of production, and so on. A redistribution of net income to the advantage of sectors where prices are rising occurs at the expense of those who have lowered costs, i.e., there is a certain leveling out of the result of economic activity of sectors. It has not always been possible to avoid this even at the level of subsectors when the net income is reflected in the price of a product of a particular type. As a consequence the role of prices as a social standard is diminished.

A. Deryabin: It might be added to this that if prices are to perform the role of an economic instrument they have to fully take into account all types of outlays in production of the product which can be localized by sectors, enterprises, and individual products (geological explorations, environmental protection, and so on). Moreover, elements of net income which are not value elements by nature (general and local taxes, levies) should not be included among costs.

A single price model for all sectors of physical production should be adopted in determining sectoral and subsectoral standard rates of profitability. Divergence from it of prices for particular products may be permitted only in connection with sufficiently clear influences of price-forming factors which are subject to quantitative recording. This model must unfailingly reflect the differing efficiency of the utilization of resources of all types. In determining standard costs one needs to arrive at an accurate computation of production cost, capital intensiveness, and other social costs per unit output. The standard rates of profitability must be determined relative to the resources used, and its value should be determined as a function of the differentiation of economic efficiency of their utilization that exists.

Such a differentiation is unavoidable and even indispensable in sectoral, subsectoral, and group (for types of products) standard rates of profitability. That is why it is necessary to renounce a universal "equal profitability" of products, which has been praised with such exaggeration by some people. It is unattainable. It is also clear that any differentiation can be done only within the limits of the total amount of the standard proportion of net income.

A. Simonyan: Determination of sectoral, subsectoral, and group standard rates of profitability results ultimately in formation of differing levels of profitability from enterprise to enterprise and from association to association. This fact becomes relevant when the conditions are being created for full cost accounting and the principle of pay-as-you-go. What ought to be undertaken in the pricing field so that those conditions become real ones?

N. Chekhlov: Practical realization of the principles of cost accounting has an influence on the method of reflecting net income in prices. But when it comes to self-financing, the following rule should above all be unshaken: prices need to reflect only the surplus product actually created or which can be created and envisaged in plans.

Self-financing does not mean that prices will include the profit necessary for the present and future expenses of associations or enterprises. Profit must fit into incomes and not exceed them. Calculations show that for most sectors and subsectors the profit included in prices for the products they produce substantially exceeds the proportion of capital investments (1.7-fold for the industrial sector). This indicates that the principle of self-financing can by and large be implemented by means of prices now in effect thanks to a redistribution of profit between the budget and enterprises.

In the context of self-financing the problem of improving the methods of reflecting net income in prices consists of their reflecting more completely and accurately the one-time outlays in the process of reproduction and a certain redistribution. All forms of net income have to be taken into account, including the turnover tax and charges by way of rent. Raising the question of lower prices on fuel and energy resources, for example, is dubious, since money accumulation in those sectors is higher than the average for the industrial sector as a whole or for the extractive industries.

A. Deryabin: I can completely agree with all of this. But experience also indicates something else. Let us at least recall the fact that one of the important results of the last review of wholesale prices was guaranteeing profitable operation of almost all industrial enterprises and associations. However, the differentiation of production costs for the same or a similar product ranges from 1.5- to 5-fold or higher from sector to sector. Under those conditions if a majority of technically backward, small, and utterly outdated enterprises is to be without a loss, this means that the prices of many industrial products (especially in machinebuilding and certain extractive sectors) are oriented not toward the socially necessary level of costs, but toward actual individual costs, thereby camouflaging backwardness and mismanagement. They do not create for the sectors economic incentives for making the transition to the more complicated strategy of the intensification of production. At this point it is disadvantageous to give up extracting minerals or producing machines if they cost even 10 times as much and are covered by existing prices, since otherwise it is necessary to increase extraction or production at other enterprises 10-fold or more to offset losses in the sector's volume of production in value terms. Thus prices oriented toward individual costs stimulate an increase not of the production of use values, but of their cost. There has to be resolution in putting a stop to divergences from the pricing principles adopted under the pretext of taking into account the "specific nature" of the production of various products.

Use of individual production costs of particular products in pricing even though those costs vary substantially from sector to sector, enterprise to enterprise, and region to region, needs to be renounced. The procedure whereby prices are set with various kinds of "preferential" allowances which are purely sectoral or regional in nature is altogether impermissible.

In order to enhance the role of prices in implementing cost accounting, it is also necessary to renounce the determination of sectoral rates of profitability adopted in planning prices as a function of the needs of the sectors for building resources to pay for resources used, for material incentive funds, to

finance various kinds of R&D projects, to raise the standard allowance of working capital, for enterprise reconstruction, and so on.

That kind of practice is not in accord with the theoretical principle concerning the structure of value--to the effect that it is not made up of individual elements (which is where we started the discussion). However, the rates of profitability adopted in planning prices quite often are derived (composed) from the sum total of requirements of sectors, subsectors, and sometimes even individual associations and enterprises, for resources to build up material incentive funds, to pay charges on productive assets, to make up losses related to the housing stock, and even for subsidies to day nurseries and kindergartens. The rates of profitability for certain sectors are in addition determined so as to take into account the necessary expenses for many other purposes as well. In other words, sectors, associations, and individual enterprises fix in advance the resources they need in the level of the price, and then they obtain those prices for their economic activity regardless of how they have been operating at any particular moment, regardless of how economically or optimally production is carried on. Such practice is holding back the rise of efficiency of social production.

A. Simonyan: How could such an approach have come about? What caused it?

A. Deryabin: The reason is that at first glance it seems to create better conditions for the enterprise to implement cost accounting. But cost accounting is not an end in itself; it must be aimed at achieving the best physical results at the lowest cost on the scale of the entire society. And prices, which are the social standard of costs, are expected to orient the activity of enterprises and their cost accounting along that road; that is, to subordinate pricing to the external and formal interests of implementing cost accounting not only results in a substantial change of the functions and role of the price, but in essence it also limits cost accounting, narrows it, and necessitates serious additional measures to maintain the proportional development of production. Specific cases indicate that preferential and easier economic conditions are by no means conducive to the development and improvement of production. For instance, since 1973 USSR Minpribor has constantly been receiving all the financial resources it needs to meet practically all the requirements of the sector thanks to a special increase of the profitability rate. And here are the results: while in machinebuilding as a whole only 29 percent of all products meet the world level (this is quite negligible), in Minpribor this figure is still lower--17 percent. It is also striking that whereas on the whole wholesale prices for the products of our machinebuilding industry are below world prices, on the products of Minpribor they are higher, indeed for certain products they are several times higher.

Preferential conditions have also been created for the production of color television sets. Rather large amounts are included in the price in advance for the repair of television sets during the warranty period. The calculation was that quality would improve with time. But this has not happened. The average television set is repaired twice during the warranty period. Yet production is profitable.

Special manufacturing equipment, equipment to mechanize and automate production processes, special production gear, and so on, are being manufactured by practically all industrial ministries at the overwhelming majority of their enterprises. This results not only in an unjustified variety of different types of equipment used, technical and structural designs, but also disproportionate costs in manufacturing and repairing this equipment. The present procedure for setting and substantiating prices contributes directly to "dissolving" the specialization of industrial enterprises, to the occurrence of single-unit and small-run production operations at enterprises specializing in something else, to the performance of superfluous and constantly repeated design and development projects in different branches in order to solve the same engineering problems. The point is that any dissimilarity in designs or manufacturing technology provides the basis for a new price on the particular equipment manufactured. Moreover, the higher price level results from the individual costs which for entirely understandable reasons are much higher than at specialized enterprises. The right extended to enterprise directors of setting prices on products manufactured under individual orders has also contributed to the appreciable "versatility" of enterprises.

The wholesale prices of equipment, which in the final analysis differs from similar equipment produced by enterprises of the main ministries only in the size of the production run, may be several times higher than the latter's price. For instance, a forming machine for vacuum film forming manufactured by the Togliatti Processing Equipment Plant is very similar in its technological parameters to the series-produced machine VVF-2.5 made by Minstankoprom, but its wholesale price is 5.5-fold higher. The prices of the clustered machine tools of the plants of the VPO "Soyuzstroymashavtomatizatsiya," whose quality is identical to the machines produced by specialized enterprises, are 1.4-1.5-fold higher on the average. All of this confirms the conclusion contained in the speech of M.S. Gorbachev at the June (1986) Plenum of the CPSU Central Committee: "The artificial hiking up of prices will not cure the economic illnesses, but only lead the workers astray and hold back technical progress. Prices which have been hiked up on the basis of the cost approach conceal shortcomings in production technology and the organization of production, and they engender a neglect of the search for economical methods of doing business."

N. Chekhlov: Pricing principles, including the principle that they reflect net income and that precise quantitative relationships be established, are not always successfully implemented in practical work. Quite often the necessary information is simply not to be had. A certain influence is also exerted by the methods of planning, financing, and business practice that have evolved and by shortcomings in the official calculation of the production cost. The prices set do not always correspond precisely to the socially necessary costs, nor does the amount of profit correspond to the size of the surplus product actually created in the sector or at the enterprise.

If the role of prices as an anticost mechanism is to be increased, the basis used for the distribution of net income should not be the actual production cost occurring at the moment of the revision, but what should be the production cost on the basis of planning targets for reducing it. If this approach



is taken when new prices are established, those sectors which achieve a reduction of the production cost would have a higher profitability than those which have not fulfilled these plans and have allowed production to become more expensive. This procedure ought to be used for forming prices for the products of subsectors as well.

A. Simonyan: We have come to the extremely important issue of the direction of the dynamic behavior of prices. The progressive development of Soviet society requires fuller use of the country's scientific-technical and economic potential. But it is not enough merely to locate untapped potential for increasing the efficiency of equipment and processes. It is also necessary to achieve conditions under which their activation would be as optimal as possible. The results of scientific-technical progress and the rising efficiency of social production should be reflected more fully in the dynamic behavior of prices and in price relations.

Scientific-technical progress brings about a reduction of the level of socially necessary costs in producing a product. To be sure, in certain cases objective factors run against this: for example, a deterioration of the mining-geological conditions for extraction of raw materials and fuel, construction of new enterprises in uninhabited regions, and so on. But still they cannot outweigh the general pattern. Only if the expenditures of social labor per unit of the end product are dropping is economic and social progress possible in the broadest sense of the word. Nevertheless, for a number of decades wholesale prices of industrial products have been rising. A situation has come about in which changes of the content (expenditures of social labor) and of its money form (prices) are going in diametrically opposite directions.

A. Deryabin: One of the reasons why this contradiction has occurred and is deepening is preservation of the rather widespread illusion that many complicated problems of current economic practice can be solved easily and quickly by raising prices. For example, when the task is set of reducing the number of enterprises operating at a loss, the first proposal made is to raise prices for the products they produce. If enterprises have to be motivated to conserve physical resources--a recommendation is immediately made to raise prices of those resources. If sectors need to have resources for self-financing of capital investments--again they recommend that prices be raised, and so on. Even USSR Goskomtsen has not always been able to resist this pressure, although following out even some of the proposals ultimately brings about a general rise of all wholesale prices.

In order to answer more fully the question about the reasons for the rise of prices we need to turn attention to the amplified impact in actual sectoral and intersector proportions in value terms whenever any changes occur in prices. We can offer an extremely simplified explanation of this issue. It is well known that in the 1982 review of wholesale prices the prices of the products of heavy branches of industry (coal, petroleum, metallurgy, timber and lumber, etc.) were raised substantially. This resulted in a growth of the profit realized by industrial enterprises. But at the same time material costs in the industrial sector increased by an amount several times greater than the growth of profit. The reason is that the rise of prices, say, on ore

and coal causes a rise in the value of the material costs of ore-dressing and coke-and-chemical enterprises and then in the production of pig iron, steel, and rolled products. Material costs in the production of machines and equipment rise in turn. And this again affects costs in the mining of ore and coal, since the prices of the machines used there have risen, and so on. We get a "chain reaction" that is evident throughout the economy. But its consequences are not always taken into account. The facts have to be faced: so long as prices rise, there will be no sizable reduction of production cost, if only because material costs represent the major portion and a growing portion of the breakdown of the production cost. It is possible to reduce the production cost of certain products, but it is not possible to reduce all the national economic costs in money form if the overall price level rises. This is how the cost method has become rooted not only in formation of the price, but also the formation of economic indicators characterizing the state of the entire economy--a method that runs counter to economic laws and to the goals of socialist production. Raising wholesale prices of the products of sectors producing instruments of labor by increasing profit causes a 5-7-fold growth of material costs in industry. If the absolute size of profit in all other sectors is increased, then the general level of wholesale prices will also increase by that value. At the same time we need to make it clear that when the wholesale price trend is downward, consumers will realize a growth of additional profit which could be a source for lowering prices. In other words, the price spiral will be turned downward. Thus the basis for development of the dynamic price trend is contained in the very cause of this trend's occurrence.

But for socialist society the most important connection is between the dynamic behavior of prices and economic growth. When the price trend is upward, consumers are not motivated to renew productive capital that is in place, and any reconstruction could prove ineffective. In such cases the extensive strategy for development, in which the principal efforts are aimed at creating new enterprises, not at reconstruction of existing ones, proves to be preferable. A deterioration of qualitative indicators at the level of the sector does not usually affect the material interests of producers.

When the wholesale price trend is downward, on the other hand, existing enterprises and associations are motivated to renew productive capital speedily, with all the consequences that derive therefrom. These are all very essential matters, essential to the entire economy and to the prospects for its development.

A. Simonyan: The second group of aspects of the overall problem of the interrelationship between the dynamic behavior of prices and economic growth is obviously related to the practical side of the matter. We have to talk about the basic directions, strategies, and methods for maintaining a dynamic behavior of prices that is conducive to economic growth.

Aside from making a fundamental change in the way amplified responses are recorded in determining the general price level and a different approach to setting the prices of new products, there are a number of factors whose use could also help to stop the rise of prices and to initiate their reduction. Calculations show that liquidation of worn-out and obsolete sections, shops, and

enterprises, which are now producing between approximately 1 and 3 percent of the product of every sector, could yield a 3-4-percent rise of labor productivity without reducing the volume of production, and in a number of cases it would even increase because of optimum use of the initial raw material at those better enterprises where capacities are not being fully utilized.

A. Deryabin: Liquidating extremely backward production operations (closing them down, reconstruction, respecialization, and so on) necessitates taking appropriate steps in the field of planned pricing as well and a radical change of the method of planning prices. First, the various price benefits (establishment of higher zonal, area, individual, and other prices) for lagging enterprises has to be renounced. The practice of extending benefits related to the turnover tax and deductions for profit which are received by local and republic industry when they produce products from raw materials which are not part of funded resources should be altogether revised. These benefits were introduced so that technically backward enterprises would have resources to improve production. Unfortunately, the hopes were not justified. The profitability of lagging enterprises is only an appearance of prosperity, which is why a procedure needs to be established in which an enterprise's losing operation or the unprofitability of even a particular product would become a topic for economic analysis at the level of the sector so that measures would be worked out to eliminate the losses.

Second, the results of scientific-technical progress need to be reflected more fully in the levels and dynamic behavior of wholesale prices of means of production. This can be achieved by renouncing the orientation of prices toward actual costs in the branches of industry. We need an approach to prices founded upon assigned standards, in which the possibilities for lowering costs by using results already achieved in the improvement of the equipment and processes for manufacturing the product would be taken into account. Emphasis needs to be put on economic incentives for the application of resource-saving processes, not only on stimulating improvement of individual product parameters.

Third, the price level and dynamic behavior of prices should fully take into account the rise of the efficiency of social production, and this should be achieved by establishing in long-range plans targets for reduction of the overall level of wholesale prices. This would be the main result of performing the measures outlined to raise efficiency and the quality of performance of all units of the production structure--from the enterprise to ministries. In addition, a mechanism should be set up for the conduct of economic activity that would give ministries and departments, associations, and enterprises an economic motivation to lower wholesale prices.

N. Chekhlov: I fully concur in the treatment of the peculiarity of the movement of costs in money form. Their change in one sector is reflected in amplified form in other sectors consuming the product. The dynamic behavior of costs in the extractive industries and above all in the coal industry has an especially notable impact on the movement of prices. For example, a rise of costs in the fuel complex and a corresponding change in the prices of its product result in a whole chain of higher costs and higher prices of the

products of the industrial sector as a whole (in order to safeguard the cost-accounting activity of enterprises), and they exceed 4-6-fold the change of prices in the fuel complex itself. The prices of the products of this complex, in which costs increase mainly because of deterioration of mining-geological and natural-climatic conditions, have had to be raised threefold over the last 20 years. Unfortunately, the efficiency of production in manufacturing sectors has turned out to be insufficient to offset the rise of these costs.

The coal industry possesses a large potential for a sharp reduction of costs. The price policy governing its products should be a factor that would provide motivation to tap that potential.

In the immediate future it seems necessary to preserve coal prices at their present level for consumers if possible and to adjust their relation to the coal coming from the promising eastern basins, the Donbass, and the Moscow basins.

The discrepancy between the dynamic behavior of prices and expenditures of worktime is related to other causes as well: for example, in a number of cases the rise of wholesale prices necessitates revaluation of fixed productive capital in the economy, which increases depreciation and, of course, production costs without an increase in the expenditures of live and embodied labor. This process is observed in those cases when the methodology for arriving at the production cost changes. New cost items are included in it, or a charge on resources is introduced without a corresponding change in the proportion of net income taken into account in prices. In addition, a growth of wages faster than labor productivity also has an adverse effect on the dynamic behavior of costs and consequently of prices as well.

Various types of prices and rate schedules operate like a siphon and represent a unified system. The change of one type of prices ultimately causes a change of the others. What we have said makes it possible to draw a conclusion as to the kind of "avalanche" of higher costs and prices that sometimes can result from their local change on the product of a particular branch!

It has to be admitted that today it is not possible to measure all the adverse consequences of the rise of prices. The main danger is that the orientation of the enterprise and association toward the rise of prices detracts from the attention paid to optimalization of production and to increasing its efficiency. The rise of prices disrupts value and physical proportions and figures as one of the basic reasons for the creation of excessive means of payment. In such a situation consumers are more interested in turning those resources into commodities than in seeking out the most economical solutions. The rise of prices makes it particularly difficult to work out and use long-term quotas and standards and it influences the entire planning process. In view of these circumstances the dynamic behavior of prices over the coming period should be determined as a most important element of their planned restructuring.



The main direction of the movement of prices in the future must be their stabilization and subsequent reduction. But this does not preclude the possibility of an improvement of price relations, especially between interchangeable products (various types of fuel, structural and building materials, articles made from synthetic and natural fibers), nor elimination of certain distortions in prices and establishment of those prices at a level that corresponds to the socially necessary cost.

In order to strengthen the pressure of prices toward cost reduction and in order to guarantee their healthy dynamic behavior 5-year plans should project price indices for the coming period so as to take into account the targets for reduction of production cost and for raising labor productivity, and the change of prices for the most important products should also become part of planning practice.

It would seem that in order to motivate the enterprise to lower prices, the proportion of profit and economic funds left at its disposition should be linked to the level of prices for the product it produces and to the dynamic behavior of those prices. In addition, it would be advisable to take up the question of including a certain portion of the price reduction in economic incentive funds.

A. Simonyan: So, theoretical analysis and practical experience indicate that the best conditions for speeding up socioeconomic development, for intensification of social production and for increasing its efficiency are created in the context of a dropping level of wholesale prices. We can note with satisfaction that at present even economists who for decades defended the principle of the orientation of prices toward costs which represent closure of the optimal plan and who remarked on what seemed to them the virtually universal depressed level of wholesale prices have begun to talk about the need to initiate and support their downward trend. It is clear that correctly determining the rate of profitability has an important role in supporting this tendency. It becomes necessary in this connection to tighten standard allowances for consumption of physical resources and to substantiate the level of standard costs.

N. Chekhlov: The main direction of the effort in this area is the setting of prices for the future. Enterprises and ministries must know what sort of cost the prices will be based on in the upcoming price review and when they are set on products planned for production. In this case prices will guide the activity of producers and orient them toward a certain level of costs and efficiency.

Some economists feel that the costs of the best enterprises should be taken as the basis of the price. It would seem that this proposal deserves thorough analysis. We should remember that even if prices are oriented toward average costs of the sector at the time when they are reviewed, the number of enterprises operating at a loss does not drop below 8 percent.

If the costs of the best enterprises are taken as the basis of the price, then the number of enterprises operating at a loss will increase substantially.

This will make conditions worse for adoption of full cost accounting and will weaken economic incentives. Moreover, enterprises operating at a loss cover their costs out of the budget, and as a rule they pay less concern to optimization of production. But this does not mean at all that the costs of the best enterprises should not be taken into account in planned pricing.

First of all, greater differentiation of the profitability of enterprises as a function of the level of costs has to be achieved both when there is a general price review and also when prices are being set on new products. The costs of the best enterprises should be the reference for defining the targets of ministries and departments for reduction of the production cost and for forming the base of prices necessary for their next review.

The level of the rate of income of branches, subbranches, associations, and enterprises should be made more dependent on the level of costs (under comparable conditions) of the particular product as compared to world prices when the price system is revamped.

A. Simonyan: So now we have come back to where we started. We agreed from the outset that the size of the surplus product actually created should be the point of departure in establishing the rate of profitability. Then we agreed that all benefits and mollycoddling conditions achieved by the elevated price level not only do not stimulate optimization of production, but on the contrary they create an extremely harmful situation. And as soon as the time comes to set price levels, then the argument is raised which essentially justifies the hiking up of prices. Incidentally, as to the 8 percent of industrial enterprises operating at a loss. Probably more than 8 percent of the enterprises are manufacturing substandard products, using resources inefficiently, underloading [original reads "fully loading"] equipment, organizing production poorly, and so on? Yet that shouldn't occur. Isn't that so?

A. Deryabin: This is a complicated question. But here is something else I wanted to say--when average costs are taken as a reference in setting prices, one gets the impression that such prices can be an incentive for improving engineering and technology and for better organization of work at enterprises where economic indicators are below the average for the branch, and to some extent in enterprises whose indicators are at or close to the average. But it is not clear how advanced enterprises are to be stimulated by such prices. It cannot be assumed that they are in no need of any improvement whatsoever. After all, it is precisely in those enterprises where the opportunities are good for further improvement. This explains the widening of the gap between the minimum and maximum costs of production of the same product, which has been observed in recent decades. At the present time even the advanced enterprises are not making much of an effort to reduce costs, since this could result in a lowering of prices and smaller profit. This problem becomes utterly concrete for enterprises and associations making the conversion to self-financing. When prices are oriented toward the average (planned or actual) costs, there is no longer any incentive whatsoever for production specialization and industrial cooperation.

The proposal that the costs of the best enterprises be taken as the reference for prices also has its theoretical substantiation. The basic economic law requires optimum distribution of resources of live and embodied labor among the sectors and spheres of social production. And distribution of the resources of social labor at which its costs are recognized as those which are socially necessary is possible only in the form of planned activity on the scale of the entire society. Here the socially necessary expenditures of labor themselves figure as the criterion for distribution of resources and for the efficiency of expenditures. Prices perform this role at a particular level.

It follows from the definition of socially necessary expenditures of labor that they are at a minimum when the best distribution of resources has been made. Apparently for planned pricing this denotes the need to orient toward costs established on the basis of the most advanced and progressive ratings of up-to-date equipment, technology, and organization of production. Only if this approach is taken in pricing is it possible to take into account the requirement of the law on conservation of worktime.

The number of enterprises operating at a loss can be regulated by means of the standard rate of profitability. The whole point is that the total amount of net income realized through wholesale prices will not change; instead of its more uniform distribution among all enterprises and associations, it will merely be concentrated at the best and average enterprises. A sizable portion of it may be drained off into the centralized income of the state, but this would not be in the form of deductions from profit, but in the form of fixed charges for resources used. This could have the result that an enterprise facing worse conditions, but performing economically and thriftily, will be profitable at the same time when an enterprise that possesses better resources but using them poorly will be operating at a loss.

A. Simonyan: Yes, at present all of this seems like a hypothesis which requires more serious scientific substantiation. But it would be interesting to see how various departments view the attempts of USSR Goskomsen first to stabilize and then to lower wholesale prices.

N. Chekhlov: I want to say with full frankness and concern that pricing authorities experience pressure from ministries and departments and from officials in the economy, who persistently propose that prices be raised on particular products. A number of prestigious officials of USSR Gosplan and USSR Minfin who propose that price revisions take into account not only the higher actual costs, but even a rise of costs in the future, have also been susceptible to this leaning.

Sometimes one also hears this in a half-jesting style from colleagues in the ministries and departments: we can, they say, achieve the planned higher growth rates of the volume of production only with the help of USSR Goskomsen, i.e., by means of a renewal of the product produced and by obtaining higher prices for it.

These attitudes make it necessary to increase the requirements concerning the economic soundness of prices, to strengthen price discipline, and to tighten planning and centralized principles in pricing, while at the same time increasing the rights and responsibility of ministries and departments, associations, and enterprises. It is precisely in this direction that the effort is being made in pricing authorities. We would hope that scientific institutions and all learned economists will take a more judicious approach to the problem of the dynamic behavior of prices and will give it serious study.

A. Simonyan: But do pricing authorities have the rights and influence to persistently and consistently pursue the established strategic line in the dynamic behavior of prices?

A. Deryabin: If nothing at all is changed in the way state pricing is organized, then it is doubtful if the committee can cope with this alone. There has to be a substantial reinforcement of the procedure for state pricing.

One gets the impression that even posing this question seems a bit strange. As a matter of fact, the system of agencies for state pricing was set up long ago and has been operating all this time. USSR Goskomtsen sets wholesale prices on products representing 80 percent of the entire output of products for industrial and technical purposes and 60-70 percent of the consumer goods. The rest of the work is done by other state pricing bodies.

In accordance with the procedure that has been adopted, pricing authorities take under consideration price proposals submitted by the respective ministries and departments. They append to them various kinds of "elaborations" justifying the level of the product's production cost. Actually the price proposals are drafted by sectoral scientific research institutes, and on new products by the manufacturing enterprises themselves. The accepted procedure presupposes that in all stages the price proposal goes through (the enterprise--the association--the ministry--pricing authorities) strict control is exercised and the necessary corrections are made in it. But let us face the truth. It is simply impractical to monitor all prices, especially in the period when they are going through general reviews. The pricing process must be objectified to the point where the subjective factors in the proposal under consideration and its submittal do not play that kind of role in determining the level of prices.

The way matters stand now, producers strive to maximize the price that is set. The higher the price and the supplement applied to it, the more substantial the money payments to persons who take part in developing the new product and organizing its production. Moreover, a higher price guarantees a growth of production in value terms (gross output, commodity output, sales, normative net output, or net output). And the growth rate of production and labor productivity depends on this, and consequently so does the rise of the wage fund and the material incentive funds. In the final analysis everything points in the direction of trying to maximize personal incomes. And if realization of those aspirations results in a synchronized and appropriate growth of the volume of the mass of commodities and paid service, there would be no problem. But this kind of automatic operation in the movement of money income and in the circulation of commodities is not possible.



It would seem that to objectify the process of pricing we need to establish conditions whose determination does not depend at any particular moment on any of the participants in drafting the price proposal (the producer, the consumer, and the pricing agency). It is clear that these conditions need to be established where the motivation to hike up the price is directly manifested. The level of prices to be set on all products needs above all to be linked to the planned wage funds, including all payments out of incentive funds and various types of bonuses. These funds are in turn planned in a close linkage to the planned demand of purchasers, the turnover of commodities, and the supply of commodities corresponding to the demand. Of course, enterprises and even ministries and departments cannot be expected to achieve that linkage in drafting the price proposals and in examining them. It is not possible to bring a particular specific price into conformity with the indicators of the medium-term national economic plan. This is achieved only by means of establishing the limits which would be fixed at the same time that the price proposal is drafted as sources (specifically named) for reimbursement of its increase, especially insofar as this concerns a rise of money payments.

Consequently, the emphasis in the effort of state pricing authorities is being moved from monitoring and checking the ever swelling flow of price proposals and their approval to the development of methods and procedures that guarantee the purposive and planned change of prices. The latter would help to support and preserve the proportions of the national economy and to stimulate an increase in the volume of output and a rise of product quality. So, what these authorities are now becoming mainly interested in is to manage the movement of prices rather than to keep them from changing. Improvement of planned pricing must be accompanied by a strengthening of these authorities and by granting them broader administrative powers. Meanwhile hardly anyone bears responsibility for violation of the rules established for drafting price proposals. When the proposals are hiked too high, they are at best rejected or corrected. The presentation of a substandard proposal should be looked upon as a form of padding deliberately committed by those persons. Pricing authorities must obtain the right to impose money fines in the proportion of between two and four monthly salaries on persons who sign a proposal for a hiked-up price.

A. Simonyan: In the press and periodicals, including our own journal, it has been noted very frequently that prices at present are doing little to stimulate the adoption and production of highly efficient new products. At the same time they note a disproportionate rise of prices of new products as compared with those previously produced. At the June (1986) Plenum of the CPSU Central Committee M.S. Gorbachev noted: "Under the pretext of modernization prices of machines and equipment and the estimated cost in construction are being hiked up." (Footnote 2) (PRAVDA, 17 June 1986) The question that arises is this: How can the incentive role of prices be strengthened even more without allowing their unjustified growth?

N. Chekhlov: USSR Goskomtsen is constantly refining the methods of reflecting the surplus product in prices of new products so as to link more closely the proportion of net income, above all profit, included in the price to the product's efficiency and quality. When there is a drop in materials intensiveness and production cost of new products, the saving is entirely or partially

included in prices as supplemental profit or takes the form of a price supplement. Moreover, supplements are assigned to prices for efficiency or quality whose proportion has been increased to 30 percent of the wholesale price. If there is a reduction in the production cost of a product already in production during the planning period, if cheaper materials are used and the performance characteristics are preserved, prices are not revised, which also makes it possible for the enterprise to obtain additional profit. We would like to note one more important aspect: when prices are set, consideration is not paid to the rate of profitability established previously, but to the actual profitability that has occurred at the enterprise.

A. Deryabin: That road leads to higher prices. An additional incentive to manufacturers represented by establishing higher profitability on a new product has the result that with each successive substitution of the product produced a still higher rate has to be established once again. Yet at many machinebuilding enterprises the product mix changes rather rapidly.

N. Chekhlov: It should not be forgotten that for the products, say, of ferrous metallurgy, more than 50 percent of light industry, and many products of machinebuilding and other sectors the prices of new products are set on the basis of normative-parameter methods. Here a direct correlation is established between the product's efficiency and quality and the proportion of net income. The lower the cost per unit of use value, the higher the enterprise's profit. But this does not signify by any means that all the problems have been solved. Now we need to work out new approaches. For example, in the 5-year period when a comparison is being made between a new product and an interchangeable product intended to satisfy the same needs, the prices should not continue to be set on the basis of normative and actual profitability, but they should be set on the basis of assignments set previously for the relative lowering of the cost of the product per unit use value. First the level of the price has to be determined, and the proportion of net income in it becomes the resultant quantity. In this case the enterprise's profit will increase in inverse proportion to costs, i.e., as a direct function of production efficiency.

Some economists see the cost principle in the setting of prices as meaning that the proportion of the supplement to the price is determined with respect to the price itself. But this is not the case. Only the additional benefit from using the product serves as the source of the supplement. Sometimes it is not only insufficient for providing a supplement in the proportion of 30 percent of the price, it is hardly possible at all. For example, in 1985 USSR Goskomtsen was able to establish supplements for efficiency for only half of the prices approved for new machines and equipment. Out of the total number of supplements only 5 percent were established in the proportion of 30 percent of the wholesale price, and on products with a small benefit the supplements were set between 5 and 10 percent of the wholesale price. Under these conditions it would seem possible to remove the restriction on the proportion of the supplements. This step is especially justified concerning highly efficient products.

A. Deryabin has rightly raised the question of fuller appreciation of the obsolescence of a product when the price is being set. The solution which has been adopted of establishing deductions from prices for products in the first-quality category is an important step in that direction. The proposal advanced to the effect that a product should be considered obsolete as soon as a new one has emerged, it seems to us, does not fully take into account the specific nature of production as it has evolved.

At the present time, as is well known, monopolies come about not only in the production of a product, but also in its design. Under these conditions the obsolescence of a product occurs even without the advent of new prototypes. A product should be considered obsolete which does not meet the social needs and in its parameters does not meet the assignments of policymaking and planning authorities or the best foreign models. The list of products to which reductions are applied needs to be broadened, or prices should be revised downward.

To stimulate the production of highly efficient products and to improve their quality, the following would be advisable in addition to the steps which have been adopted: remove the restriction on the proportion of supplements to prices for highly efficient products; define the sum total of profit as the difference between the wholesale price, set so as to take into account quotas and standard rates of efficiency of the product and to guarantee its reduced relative cost, and the enterprise's costs; tighten the requirements with respect to relative cost reduction of equipment, machines, and other forms of technology (at present the cost reduction must be at least 15 percent in all cases) so as to take into account assignment for increasing the productivity of machines by 2-2.5-fold over the next 15 years; the economic benefit calculated with respect to the parameters, which is taken into account in setting prices and price supplements, should be adjusted (downward) on the basis of the objective conditions for use of the potential benefit of the product in the national economy; the validity of the price supplements should be restricted in time, since their validity over the entire period of time for which the state Quality Emblem is awarded detracts from the motivation of design organizations to develop new products; price reductions should also be applied to products not subject to certification if they do not meet the world level and the requirements of the economy. The principle of applying the reductions only to products in the first-quality category has the result that ministries lengthen the list of products not subject to certification.

On highly efficient technology that exceeds foreign analogs a profitability should be applied that is 1.5-2-fold or more greater than the standard rate, and it should be reduced on products which do not meet the world level. This procedure takes into account that ministries and departments must submit to pricing authorities price proposals accompanied by materials containing the necessary comparisons to foreign prototypes.

A. Deryabin: Setting prices of new products on the basis of the prices of products previously put into production (even including a certain increase) runs counter to the real processes of the formation of socially necessary expenditures of labor. The point is that socially necessary expenditures of labor are determined not by the conditions of production, but by the conditions



of reproduction. Consequently, their level on an old product will not depend on actual inputs of labor to produce it, as was the case before the new product made its appearance, but on the costs of its manufacture. It is this that makes it necessary to apply the principle of taking into account the obsolescence of a product. An old machine "loses its exchange value as machines of the same design begin to be reproduced more cheaply or better machines come into competition with it." (Footnote 3) (K. Marx and F. Engels, "Soch." [Works], Vol 23, p 415)

Experience has shown that great hopes should not be placed on the deductions and on the standard time periods for the output of machines and equipment. It is impossible to take seriously departmental certification of products used as the basis for assigning supplements. Here are the facts: in 1984 168 machines of Mintyazhmash went through certification; the superior-quality category was awarded to 157 of them. (Footnote 4) (See, for example: Yu.V. Yakovets, "The National Economic Benefit and Prices," EKONOMICHESKAYA GAZETA, No 32, 1985) It turns out that nearly all the certified machines qualified for prices and a supplement up to 30 percent, while deductions in the amount of 5 percent were applicable to only 11 articles. After all, the supplements must be entirely offset by the reductions; otherwise there may be a disproportion between the value and physical composition of output. It is also doubtful that all 157 machines met the world level of quality. In addition, certification of products is highly formalized: on a single product it is necessary to prepare 46 documents running to 200-300 pages, and to spend 3 or 4 months on this, involving dozens of people.

Radically new solutions are indispensable. An important step might be to adopt a procedure in which lower prices would be set not only on products to be withdrawn from production or assigned to the first-quality category, but even on all products (individual parts, assemblies, units, machines, and so on), in which new structural or technological solutions might be used.

The lowering of prices of obsolescent products would cover several times over the costs of the new product. As a result the pattern of relative reduction of prices (per unit of useful benefit) would be accompanied by their absolute reduction on a sizable portion of products. Now the sum total of supplements to prices on new products exceeds the reduction 10 times over. It would seem that the situation would change radically if the deductions were applied to all obsolete products.

The problem of material incentives for manufacturers of new technology also is in need of a solution. The additional profit formed from the incentive supplement to the price now serves that purpose; it is only a portion of the future economic benefit from use of the new product. But however large the benefit from the production and application of a new machining center, generator, or device, it does not increase the total volume of consumer goods produced and sold through trade, nor is it reflected in the volume of paid services.

This benefit could in future be constructively reflected by virtue of a certain redistribution of the labor resources and productive potential saved to the advantage of the branches producing consumer goods and rendering services



to the public. But bonuses for new machinebuilding products are paid at a particular moment. Consequently, the larger those bonuses, the more strained the situation in meeting effective demand. There needs to be a change in the source of material incentives for manufacturers of new products, and in our view this should not be the future economic benefit, but the actual reduction of money income of those who have not sufficiently taken part in applying the results of scientific-technical progress. Consequently, the proportion of the material incentive at each enterprise would not depend solely on how fast it was putting new products into production and how much faster it was in this than other enterprises. Reduction of the production cost related to application of a new machine must be the basic aim in almost all cases. Only in connection with solving specific problems related to environmental protection and human health is it possible to go no further than the condition that the cost not change when the new equipment is operated as compared to the previous equipment, if the former actually improves the situation with respect to human health and the environment.

A. Simonyan: So, in a socialist economy there is an objective possibility for conscious and purposive management of the movement of prices, which creates the best conditions for economic growth and acceleration of scientific-technical progress. New approaches to solving the problems of the methods and methodology of pricing are needed in order to take advantage of that possibility. We need, first of all, to change the direction of the dynamic behavior of wholesale prices and to bring it into line with the downward level of expenditures of social labor to produce the unit of output. Stimulation of scientific-technical progress needs to be linked to guaranteeing a reduction of the overall price level. Effective solutions to these problems are not possible without strengthening centralized planned pricing and without increasing the authority of pricing agencies. Our journal has been elucidating the problems related to planning the country's economic and social development. For instance, the very important question of the interrelationships between planning and pricing. What needs to be done so that prices and the plan operate in the same direction?

N. Chekhlov: The entire system of planning and financing needs to be made more susceptible to the change of prices, especially downward, which above all means abandoning the mandatory adjustment of proceeds between manufacturers and consumers whenever there is a price change. This cumbersome procedure might wisely be preserved in the case when a product whose prices are being changed is supplied to a very limited number of consumers. So that the change of prices does not affect the budget, provision should be made in plans to increase by an equal share the assignments of ministries to transfer profit to the budget by the amount of the price reduction intended in each year (we are not referring to large-scale general price reviews), and national economic proportions should be changed to a certain degree. Introduction of the normative method of profit distribution will be favorable to implementing the approach proposed.

A. Deryabin: Another observation. Up to now what we have meant by planned pricing was the binding setting of prices for a particular period of time. This, of course, still does not signify actual planning of prices. The simple

setting of prices by a government agency, aside from a plan and without one, cannot reflect the process of formation of socially necessary expenditures of labor. That kind of pricing reflects only the existing level of production costs. Because of the natural gap in time between discrete changes in prices and constant changes in proportions, this reflection is always distorted. The shortcomings of the pricing system are in fact rooted precisely in this.

The general solution to the problem is well known--prices and the plan must be worked out simultaneously on the same economic basis. An important move has already been made in this direction: if current price changes have not been altogether eliminated, in any case they have been sharply reduced. Now it is necessary to work out planning indicators of price changes under the impact of their current regulation, to take into account the stability of prices and value indicators in the 5-year plan as objects of medium-term planning. Medium-term planning of physical, value, and financial proportions should be done on this basis. In the plans for the country's economic and social development provision should be made for a price section that would include the interrelated change of all types of prices (wholesale, purchase, retail, rate schedules for services, estimate prices in construction) as well as the average prices for the most important product groups. Up to now prices used in aggregate form by planning agencies in various types of substantiations of planning assignments in computations have quite often had nothing in common with the actual changes in average sales prices. The shifts recommended in price levels and price relations may in reality prove to be directly opposite to one another.

Changes of wholesale prices of industrial products are usually substantiated by the level of costs. As a result prices as an active instrument for management are becoming a passive category performing only a recordkeeping function. If prices are to exert a vigorous influence on the level of costs, rigid indicators of the change of price levels and price relations for groups of industrial products have to be established in medium-term and long-range national economic plans.

Thus two aspects of indicators of price movement need to be represented in the plan. The first, worked out computationally, would be the basis for working out planning targets in value terms (in current planned prices). It must contain the average (aggregate) prices. These prices will in fact be the basis for the second breakdown of the plan. This might contain indexes of price changes by sectors and types of products, with a breakdown by years, and in the annual plan there would be a quarterly breakdown.

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## RESOURCE UTILIZATION AND SUPPLY

### OFFICIAL CALLS FOR GOSSNAB RESTRUCTURING, MORE AUTONOMY

Moscow MATERIALNO-TEKHNICHESKOYE SNABZHENIYE in Russian No 7, Jul 86 pp 3-11

[Article by B. Yakovlev, deputy chairman of USSR Gosplan: "To Improve Planning, To Observe the Discipline of Deliveries, and To Expend Resources Efficiently"]

[Text] The accomplishment of new tasks in the economy is impossible without an in-depth restructuring of the economic mechanism and the establishment of an integrated, efficient, and flexible system of management, which makes it possible to more fully realize the possibilities of socialism. The political report of the Central Committee to the 27th party congress stressed that economic management needs constant improvement. Now, however, the situation is such that we cannot limit ourselves to partial improvements--a radical reform is needed.

Its meaning consists of actually subordinating all our production to public requirements and to the satisfaction of people's needs and in directing management toward improving efficiency and quality, accelerating scientific and technical progress, and developing workers' interest in the results of labor, initiative, and socialist enterprise in every national economic link. This also fully applies to upgrading the state-wide system of material and technical supply. It should be transformed into a flexible economic mechanism helping the national economy to operate smoothly and steadily.

#### In the Interest of Associations and Enterprises

The growth of the rates of the country's social and economic development on the basis of the acceleration of scientific and technical progress, structural reorganization of the economy, and application of efficient forms of management of public production places higher demands on the balance of plans and increases its effect on final national economic results. We will not be able to attain what has been envisaged, the 27th CPSU Congress noted, if we do not introduce order in planning.

At present USSR Gosplan, USSR Gosplan, ministries, and departments engage in the planning of material and technical supply. The scattering of essentially the same tasks among them gives rise to many difficulties in the provision of

industry, transport, construction, and other national economic sectors with raw materials, supplies, and equipment. Therefore, as the level of balance rises and the required reserves are created, in our opinion, it is necessary to raise the role of USSR Gosplan in the development of supply plans with a comprehensive products list, relieving USSR Gosplan of a detailed allocation of material resources. With regard to ministries and departments only the compilation of material balances and plans for the distribution of the products that are fully produced and consumed by their sectors should be reserved to them.

Such a restructuring will enable USSR Gosplan to concentrate its attention on the accomplishment of the tasks set for it by the 27th CPSU Congress--formation of general economic, intersectorial, and regional proportions. Ministries and departments will also stand to gain. They will be able to direct their activity toward determining the strategy of scientific and technical progress in the sector, the prospects for its development, raising the general level of economic work, and, ultimately, fully satisfying society's needs for products.

The measures for the search for more efficient forms and methods of planning, stimulation, and organization of production taken by the party are directed primarily at improving the activity of labor collectives. Enterprises producing one-half of the industrial products, the entire communication sector, domestic services, and some transport enterprises now operate under new conditions of management. All industrial and transport enterprises will operate on the basis of these principles as of 1987. Other national economic sectors will also join them during the 12th Five-Year Plan.

The full transfer of the economy to new conditions of management makes heavy demands on planning bodies. Right now it is necessary to reorient their activity so that enterprises and organizations in advance, before plan approval, have output plans, know what material resources are allocated for the fulfillment of these assignments, and can promptly conclude contracts for the delivery of necessary types of raw materials, supplies, and articles. The existing procedure of formulation of annual plans for material and technical supply does not offer such a possibility. Therefore, there is an urgent need to bring it in correspondence with the requirements of the decree of the CPSU Central Committee and the USSR Council of Ministers "On a Wide Dissemination of New Methods of Management and Intensification of Their Effect on the Acceleration of Scientific and Technical Progress." The following periods for the implementation of the basic stages in plan preparation are proposed:

Before 1 March of the year preceding the planned year USSR Gosplan determines the data on the preliminary need for products for production and technical purposes and submits them to USSR Gosplan, ministries, departments, and councils of ministers of the Union republics. Having received these data, ministries, departments, and councils of ministers of the Union republics draw up draft production plans with a comprehensive products list, which are coordinated with USSR Gosplan before 1 May of the year preceding the planned year. By 15 May USSR Gosplan submits proposals with substantiations and calculations for promptly overcoming bottlenecks in meeting the requirements of the national economy in certain aspects of production.



USSR Gosplan, ministries, departments, and councils of ministers of the Union republics should receive in advance from USSR Gosplan output assignments before 20 August and allocations for material and technical resources for the products list of the state plan and USSR Gosplan, before 1 September. In accordance with the same procedure USSR Gosplan before 15 September assigns allocations for material resources to ministries, departments, councils of ministers of the Union republics, and territorial bodies of our system according to the products list distributed to them.

After that, within a period of no more than 3 weeks, ministries, departments, and councils of ministers of the Union republics should present to subordinate associations and enterprises assignments for output in physical terms and allocations for material and technical resources. At the same time, the indicated data are submitted to all-Union main administrations for supply and sales and territorial bodies of USSR Gosplan, which are obligated to ensure the issue of orders for the delivery of products within a period making it possible to conclude contracts between suppliers and consumers no later than 15 December of the year preceding the planned year.

Undoubtedly, this procedure will require the acceleration of planned calculations on the basis of intersectorial and interproduct balances. In connection with this the introduction of advanced technology of calculations with the use of computer hardware seems advisable. Such a direction in the improvement in planning work will make it possible to raise the scientific substantiation of adopted decisions and will create conditions for an overall coordination of distribution plans with an enlarged and comprehensive products list. In a short period it is possible to work out several draft plans and to select the optimal. Subsequently, the utilization of computers will enable planning bodies to shorten the period of performance of basic work on plan preparation so that the campaign of conclusion of contracts is completed in November of the year preceding the planned year, which will create for associations and enterprises more favorable conditions for a prompt preparation of production and for ensuring a steady and smooth operation.

For these purposes we should give up the practice of introducing corrections in the volumes of deliveries envisaged by contracts for the first quarter of the planned year in November-December, after the approval of the state plan, and for the second quarter, in April-May, when the results of the census of material resources are known. After all, every change necessitates a correction of production and transportation plans, which enterprises cannot do. Therefore, a procedure, under which it is permitted to make the necessary changes and specifications only for the second half a year of the planned year, should be established.

#### Choice of the Supply Form Is up to the Consumer

The 27th CPSU Congress confirmed that the fundamental line of our actions consists of strengthening and improving the centralized planned management of the economy on the basis of the unshakeable principle of democratic centralism. At the same time, the party will resolutely carry out work on expanding the limits of independence of associations and enterprises,

increasing their responsibility for final results, and intensifying cost accounting. In the area of their provision with material resources this means an extension of the rights and possibilities of choice of forms of supply, which correspond to conditions of production consumption, sharply shorten the time interval between the occurrence of a need and its satisfaction, and increase the efficiency of supply and sales processes.

The development and overall application of such forms of material provision for production as wholesale trade, direct and long-term economic relations, a system of warehouse supply for consumers with the provision of various additional services to them, and the rental of technical facilities fully meet the enumerated requirements.

At the first stage of development of wholesale trade scientific research, design, and technological organizations and higher educational institutions will be provided with materials and equipment through the territorial bodies of our system. In order to perfect the supply mechanism as applied to industrial enterprises, it is planned to transfer all the associations and enterprises of the Ministry of Construction, Road, and Municipal Machine Building to wholesale trade. At the same time, the new supply procedure extends to the USSR Ministry of Health, the USSR Ministry of Culture, the USSR Ministry of Higher and Secondary Specialized Education, and a number of other nonindustrial ministries. Subsequently, as experience accumulates, the level of balance rises, and the necessary reserves are created, this flexible form of supply of products for general industrial purposes, whose list should be determined by USSR Gosplan and USSR Gossnab, will extend to other national economic sectors. Then operations performed by the economic method will begin to be provided by way of wholesale trade with the capital of the production development fund, the fund for social-cultural measures and housing construction, and bank credits.

Consumers receiving material resources by way of wholesale trade will be relieved of the cumbersome system of an early submission of orders and calculations. They will be able to promptly solve problems of supply on the basis of long-term contracts and cost-accounting mutual relations with territorial bodies of USSR Gossnab and to carry out their activity with smaller material stocks. Undoubtedly, every consumer should be economically responsible for the utilization not according to purpose of materials and equipment obtained by way of wholesale trade.

In accordance with the requirements of the 27th CPSU Congress, direct and long-term economic relations will be further developed during the 12th Five-Year Plan. We believe that their improvement should proceed along the path of expansion of the independence of enterprises--consumers and producers--in the coordination of the assortment, quality, dates, and other terms of delivery of products on a long-term contractual basis.

In particular, production associations, enterprises, and supply and sales organizations transferred to such relations should be granted the right to transmit in agreed sizes to suppliers capital investments (from development funds), material resources, wage funds, and the numerical strength of workers for the implementation of mutual measures for expanding and renovating the

assortment and improving the quality of products stipulated by contracts. In turn, producers in coordination with consumers should be permitted to establish payments in addition to wholesale prices for the delivery of articles with higher technical and economic indicators on schedule.

Here is another important matter. Basic Directions for the Country's Economic and Social Development for the 12th Five-Year Plan and Future Development envisage an expansion of the possibilities of consumers' effect on the technical level and quality of output. After all, it is no secret that now, taking advantage of the noncompetitive situation in the domestic market, producers of means of production literally dictate their will to the enterprises to which they deliver their products. Upon the conclusion of contracts they accept orders not in the full volume and assortment indicated in issued orders, impose on consumers articles, which they do not need, and artificially create conditions, under which they are forced to take products not corresponding to submitted technical documents.

All this does great damage to the national economy. Here is just one example. Last year state bearing plants produced a total of 5 million units of articles not in demand. At the same time, they underfulfilled the plan for the production of key products, which they were supposed to deliver according to concluded contracts. Not having received the necessary bearings, consumers in turn underdelivered a large number of articles which other enterprises expected from them. Such a breach of delivery discipline, as noted in the political report of the CPSU Central Committee to the 27th party congress, makes waves throughout the national economy and lowers the efficiency of the economy.

Managers of ministries, departments, production associations, and enterprises will have to do a great deal to mobilize available resources and to strengthen contractual discipline. At the same time, in order to put an end to producers' dictate, in our opinion, it is necessary to legislatively establish their responsibility when concluding and executing contracts to accept orders from enterprises and supply and sales organizations in a full volume and assortment if they correspond to production specialization and to the documents for the delivery of products issued by USSR Gosplan bodies.

Improving the state-wide supply system, it is necessary to enhance the role of our territorial bodies in the establishment of economic relations between consumers and suppliers. With regard to producers located in their economic regions these bodies should act as the only customers and purchasers of all produced products (except for those delivered on the basis of direct relations and special equipment). Such a measure, in addition to intensifying the effect on producers, will make it possible to really consolidate orders, which will create favorable conditions for the performance of adopted obligations for enterprises.

Documents of the 27th CPSU Congress stress that improvement in the entire system of management should be based on the unshakeable principle of centralized planned management of the economy. In connection with this it seems advisable to grant USSR Gosplan the right to give ministries and departments directives concerning volumes of output in the necessary



assortment. These directives should be strictly fulfilled when production plans are approved for associations and enterprises, which will serve to strengthen the discipline of deliveries and to more fully provide the national economy with material resources.

Along with direct and long-term economic relations and wholesale trade such an efficient form as supply for consumers from warehouses of enterprises through deliveries by our system's territorial bodies also requires an accelerated development. Its advantages lie in the fact that it makes it possible to provide a wide assortment of materials and articles for enterprises and organizations consuming them in nontransit quantities. Furthermore, such a form of supply makes it possible to centralize work on the preparation of products for production consumption, which is advantageous for consumers, whose performance of these operations by their own forces leads to an overexpenditure of material resources and to an inefficient utilization of fixed capital and manpower.

During the current five-year plan the volume of warehouse deliveries should increase, as a minimum, 1.3-fold, and the volume of the preparation of products for production consumption, no less than threefold. Such high rates of their growth should also be retained during the subsequent period until the year 2000.

Under the conditions of acceleration of scientific and technical progress there is a greater need to promptly provide a large number of consumers with new and traditional models of instruments, machinery, equipment, and other technical facilities. Therefore, the development of rental as a collective form of their consumption acquires special importance. In this we see the real prerequisites for an increase in output-capital, a decrease in expenditures, and a rise in the coefficient of utilization of new equipment and instruments on the basis of their multiple turnover. During the five-year plan the volume of the rental pool in our system's territorial bodies will increase approximately 2.5-fold.

#### Against Mismanagement and Wastefulness

The strategy of profound transformations in the national economy developed by the party is directed toward accelerating economic development. However, their implementation will require much time, whereas we should attain an increase in the rates of growth right now. Therefore, the maximum realization of all our potentials is needed. A decrease in material consumption is one of them. In the political report of the CPSU Central Committee to the 27th party congress Comrade M. S. Gorbachev noted the following: "The psychology of a significant number of managers of different levels was formed under conditions of an abundance of resources. Such wealth spoiled many of them and led to wastefulness. However, the situation changed a long time ago... We began to pay a high price for the extraction and delivery of each ton of petroleum, ore, and coal. We must not close our eyes to these facts, we must consider them. And we must save on everything and everywhere..."

The efficiency of utilization of material resources should be increased by improving the planning of saving, setting norms of expenditure and stocks,



implementing resource saving measures in the sphere of circulation, and drawing secondary raw materials into the national economic turnover. It is also necessary to intensify control over the utilization of physical assets at all the stages of their circulation and to activate the economic incentive system.

It seems to us that it is time to give up the approval in plans of assignments for an average decrease of norms of expenditure and an additional saving of material resources. We might as well admit that often they are worked out without a sufficient substantiation. Therefore, it is proposed that the section "saving of material and fuel-power resources" be introduced into plans. Assignments for saving each type of resource in a quantity that would cover no less than 75 to 80 percent of the increase in the need should be envisaged for ministries, departments, and councils of ministers of the Union republics in it. This section should also indicate measures making it possible to obtain the indicated saving (change in a design, introduction of waste-free technology, and rise in the coefficient of utilization of fuel, raw materials, and supplies) and the resources allocated for the realization of such measures from state sources and internal capital.

We cannot fail to mention that the state of work on saving and thrift largely depends on the level of reserves of raw materials, supplies, fuel, and manufactured items. In the last few years the rates of their growth have greatly outstripped the rates of increase in production. It is time to put an end to this. In our opinion, in the management of reserves it is necessary to increase the role and responsibility of our system's bodies. We must impose on them the duty to examine and approve the norms of production and sales (commodity) supplies worked out by ministries, and to plan the combined supplies throughout the national economy, including commodity reserves at enterprises for deliveries of products of USSR Gossnab.

At the same time, it is necessary to develop economic standards of maximum ratios of the rates of growth of reserves and production volumes ensuring an acceleration of the turnover rate of material resources diverted to form production supplies and incomplete production. A statute on economic incentives for associations and enterprises to observe and improve established normative ratios, and for supply and sales organizations to accelerate the turnover rate of supplies in the region of their activity should be introduced simultaneously.

It is important to prevent further accumulation of above-norm and unused remainders of material resources. USSR Gossnab and its local organizations should receive the right in the regions of their activity to promptly redistribute the entire products list with due regard for the process of fulfilling set assignments for saving resources, and for the availability of stocks of raw materials, supplies, and equipment at industrial enterprises and construction projects, as well as at warehouses of product delivery enterprises.

The maximum utilization of secondary resources is one of the important directions in work. During the years of the 11th Five-Year Plan some territorial bodies of our system, for example Ukrainian SSR Gossnab,

accumulated considerable positive experience in this respect. However, the share of secondary raw materials in production consumption is not yet significant. The plan for utilizing timber waste, blast-furnace and steel smelting slag, worn-out tires, and rubber and ash-slag waste was not fulfilled last year.

In his report on Basic Directions N. I. Ryzhkov, chairman of the USSR Council of Ministers, said the following: "USSR Gosplan and USSR Gossnab must approach the utilization of secondary resources from principled state positions." That is why we must fundamentally change the attitude toward this matter in order to accomplish the task set by the 27th CPSU Congress, that is, to significantly increase the proportion of secondary raw materials and to bring them up to no less than 10 or 12 percent, on the average, which will make it possible to release initial raw materials worth up to 15 billion rubles in 1990 and up to 20 billion rubles, in the year 2000.

Among the most important problems of increasing the efficiency of utilizing material resources, the quality of output and of work is, perhaps, the most acute and urgent. This is the generalizing indicator of scientific and technical progress, of the level of production organization, and of the standard and discipline of labor--one of the main sources of saving. The 27th CPSU Congress cited the following example: An increase of only 10 percent in tire life is equivalent to an annual output of 6 million tires, that is, as many tires as are missing now for the satisfaction of the needs of both the national economy and the population.

Our system's bodies are engaged in specific work on improving the quality of supply for economic sectors, as well as on producing high-quality products at subordinate enterprises on the basis of the development and introduction of new equipment and advanced technology. At the same time, the results obtained do not meet the increased demands for a stable and qualitative provision of the national economy with material and technical resources. All-Union main administrations of supply and sales do not work with ministries sufficiently and do not get from them a renovation of articles and a replacement of their obsolete types with new ones meeting modern technical requirements.

Enterprises for deliveries of main administrations for supply and sales of the Union republics and of main territorial administrations often do not observe sectorial standards for technical freight processing and standard instructions for the acceptance, placement, and storage of commodity stocks. As a result, the quality of products placed in warehouses is lowered. Nor is proper attention paid to a fundamental improvement in the quality of articles, secondary resources produced by enterprises, and containers delivered to consumers by our system's container repair enterprises.

Improvement in quality, the party congress pointed out, is a national task which can be accomplished only by the common efforts of all management links, all enterprises, and all workers, guided by the achievements of modern science and technology and by the initiative and creativity of the masses. The maximum mobilization of forces and persistence and continuity in the implementation of adopted decisions are needed. Therefore, administrations of USSR Gossnab and all-Union main administrations for supply and sales should

have specific programs of work with ministries and departments on a fundamental improvement in the quality of output. At the same time, an accelerated renovation of the list of products and the organization of their output at a new technical level should be kept in mind. State committees for material and technical supply of the Union republics and main territorial administrations must develop practical measures aimed at improving the quality of products produced at our system's enterprises.

We expect a contribution to the solution of this important problem from the scientific research and planning-design organizations of USSR Gossnab. Their efforts should be concentrated on the development and introduction during the 12th Five-Year Plan of a comprehensive scientific and technical program for the development of a state-wide supply system for the purpose of attaining a qualitatively new level of provision of consumers with material resources.

#### **New Tasks and a Supply Base**

An expansion of the scale of activity and giving new functions to USSR Gossnab require a further improvement in the management of supply and sales in the country, strengthening and development of the production potential of our system, and increase in the efficiency of work of all bodies for material and technical supply for the national economy. Taking into consideration the prospects for the development of wholesale trade and the expansion of warehouse deliveries, production services, and the rental of technical facilities, it is necessary to carry out the further concentration of resources in state-wide supply bodies. For these purposes it is necessary to take decisive measures to abolish departmental supply, sales, and outfitting organizations operating in parallel.

The need for such a step is dictated by the fact that supply and sales organizations of USSR Gossnab are more efficient. For example, distribution costs per ruble of wholesale sale at them are approximately fourfold lower, and output per worker, four- or fivefold higher than in departmental organizations. The turnover rate of commodity supplies at bases of ministries and departments is 1.5-2-fold lower than at warehouses of enterprises for deliveries of products of our system.

The liquidation of departmental supply, sales, and outfitting organizations should take place with a simultaneous strengthening of USSR Gossnab bodies in the center and localities. At the same time, it is necessary to take measures for an expansion and qualitative transformation of the material and technical base of our supply and sales organizations. Despite the extensive work carried out during the 9th, 10th, and 11th five-year plans, the level of its development lags behind the needs of the national economy. Suffice it to say that the machine-worker ratio at enterprises for deliveries of products of territorial bodies is almost 1.8-fold lower than in industry.

We see the main direction in improving the material and technical supply base in the significant expansion of the scale and acceleration of the rates of reconstruction and technical retooling of existing enterprises on the basis of introducing the achievements of scientific and technical progress. This direction will make it possible to mechanize and automate production



processes, to increase labor productivity in loading-unloading and warehouse operations, and to reduce the share of manual and heavy operations.

Of course, we should not give up the construction of new projects. Without them we will not attain an efficient concentration of supplies and an expansion of deliveries of complete sets of products in efficient batches in accordance with the assortment demand of consumers and in a form prepared for use in production. Without new construction it is difficult to create the necessary conditions for the storage and processing of products. Our system now accounts for only 10.8 percent of the warehouse areas available in the country.

The reconstruction and technical retooling of existing enterprises and the construction of new projects require substantial funds. In connection with this we believe that, in addition to state capital investments, it is necessary to search for other sources of financing. It seems advisable to permit USSR Gosstab to spend existing funds (profit) from supply and sales activity on developing the material and technical supply base, as well as on constructing apartment houses and cultural-domestic projects.

Funds paid under conditions of share participation by ministries and departments interested in seeing to it that, as a result of an improvement in warehouse provision and an expansion of the volumes of production services and rental, the profitability of enterprises increases should also be an additional source of the strengthening and development of the material and technical base of the state-wide supply system.

Recently the CPSU Central Committee and the USSR Council of Ministers adopted the decree "On Additional Measures to Improve Capital Construction for the Purpose of Acceleration of Scientific and Technical Progress in the National Economy." The duty of the territorial bodies of our system is to develop their activity connected with the technical retooling and reconstruction of existing enterprises and the construction of new warehouse complexes in strict correspondence with the requirements of this decree.

The chief objective is a strict observance of normative periods of construction of projects. In the past we often delayed the performance of construction-installation and other operations and postponed the commissioning dates of cardboard factories and other enterprises. Such cases must be avoided now. Prompt commissioning of projects is a reliable guarantee of the successful accomplishment of the tasks set for the state-wide supply system.

The 27th CPSU Congress gave a high moral and spiritual tone to party activity and to the life of the entire country. Like all the Soviet people, workers in the USSR Gosstab system joined in the practical work on implementing the plans envisaged by the party. Our task is to persistently improve the state-wide system of material and technical supply, to fight for the strengthening of the discipline of deliveries and for the saving and efficient utilization of material resources, and to successfully realize the assignments of the current year and the five-year plan as a whole.



We can attain this if we are able to mobilize every worker of the central apparatus, all-Union main administrations for supply and sales, all-Union main administrations for supply of complete sets of equipment, instruments, cables, and other articles for high-priority construction projects in the coal, petroleum, and other sectors of industry, and territorial bodies for an active participation in the implementation of what has been envisaged. The political report of the CPSU Central Committee to the 27th party congress notes that to convince wide strata of workers of the correctness of the chosen path, to interest them morally and materially, and to reorient the psychology of personnel are the most important conditions for an acceleration of our growth. The higher the discipline, organization, and responsibility for the entrusted job and for its results are, the quicker the advancement will be.

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## REGIONAL DEVELOPMENT

### KAZAKH VERSION OF 'INTENSIFICATION-90' PROJECTED FOR 12TH FYP

Alma-Ata NARODNOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 7, Jul 86 pp 3-7

[Article by KaSSR Gosplan Science and Technology Department Chief Candidate of Economic Sciences Ye. Sagimbayev: "Intensification-90: Prospects, Problems"]

[Text] The concept of accelerating the social and economic development of our country based on the utmost intensification of social production that was adopted by the 27th CPSU Congress fully determines the direction of development of the national economy of Kazakhstan for the 12th Five-Year Plan and to the year 2000. These tasks acquire especial importance for the extensive Kazakhstan region with its large scientific and technical potential.

Many scientific research organizations and more than three thousand design subdivisions, experimental test shops, sections and laboratories at enterprises are concentrated in the republic. From year to year, production is ever more saturated with means of automation and mechanization. Almost 7,000 mechanized and automated lines operated in Kazakhstan in 1985, along with more than 3,600 integrated mechanized and automated sections and shops, about 43,000 automated and semi-automated units of equipment not built into lines and about 600 robots and manipulators of various types.

Up to 20,000 technical innovations are incorporated each year at enterprises, the efficiency of which has reached almost 100 million rubles.

In the process of re-orienting the national economy toward intensive methods of operation, the growth rate of social production has accelerated and individual qualitative indicators have improved. National income has tripled over the 10th and 11th Five-Year Plans. Industrial production increased by 19.4 percent in the last five-year plan.

A large amount of capital construction was carried out. In 1981-85, 47.2 billion rubles of fixed capital were placed in operation, or an average of 9.4 billion rubles a year versus 7.9 billion rubles in the 10th Five-Year Plan.

Transportation, communications and other sectors of material production and the non-productive sphere were also further developed.

Progressive structural shifts occurred and are occurring in the national economy of the republic. They are characterized by the steady growth of the proportion of industry in the gross social product, by intrasectorial changes and by an improvement in the territorial proportions of economic growth.

The significance of the productive forces of the republic in the country's balance sheet increases each year, since the mineral wealth of Kazakhstan is drawn ever more into economic circulation, and it is changing into a central region of the country in the production of phosphorus, non-ferrous metals, cheap electric power and other types of products.

Positive shifts in economic development are also characterized by the increasing level of concentration, specialization, and cooperative and combined production. Currently only 2 percent of industrial enterprises produce 43 percent of all products. They require more than two thirds of all electric power, and half of all fixed industrial productive capital is concentrated in them.

In positively evaluating the results of economic and social advancement, however, those negative phenomena that prevented the republic from building up the necessary rate of efficient development in social production cannot be forgotten.

Labor productivity in industry grew very slowly. Over the five years, it increased by a total of 10.7 percent (the plan target is 15.3 percent). As a result, social production through growth in labor productivity was augmented no more than 50 percent, and less than that in a number of sectors. The materials consumption of national income increased, profitability decreased and return on investment declined.

The existing rates of technical progress and its efficiency still do not meet the scope of the tasks of production intensification. The measures of the new-equipment plans provide for only about half of the overall growth of labor productivity and 28 percent of the increase in production. Consequently, capacity utilization is not improving as well. A third of the mechanized and automated lines at enterprises operate only on a single shift, and only half of them are utilized at planned productivity.

A powerful material, technical and scientific base has moreover been created in the republic. This obligates everyone to work better, in the expression of Kazakhstan Communist Party Central Committee First Secretary Comrade D. A. Kunayev, "...at the highest level," and to more rapidly and actively develop the economy.

With the aim of strengthening the influence of technical progress as a key link in the group of measures directed toward raising the efficiency of social production, the Kazakhstan CP Central Committee Buro has also posed the task of forming a republic Intensification-90 territorial sectorial program for 1986-90 based on the experience of Leningrad.

The chief purpose of economic intensification is to bring the national economy of the republic rapidly onto the rails of primarily intensive development.

The concept of the scientific and technical, as well as social and economic, development of the Kazakh SSR both for the future and in the years of the 12th Five-Year Plan proceeds from the premise that the position that the republic currently occupies in the national economy can and should be strengthened. There exist real possibilities for this: natural resources are considerable and economic potential is growing. The principal purpose of the territorial sectorial program of economic intensification can be precisely determined from this: to ensure the fulfillment and overfulfillment of the control figures of economic and social development of the Kazakh SSR for 1986-90.

The program's circle of problems is exceedingly broad and includes:

- ensuring the comprehensive development of the sectors of the national economy of the republic;

- expanding scientific research and practical research on the assimilation of natural resources and the development of the fuel-and-power and raw-material bases of industry sectors;

- developing and incorporating new equipment and progressive technology;

- improving the utilization of fixed capital and increasing the share of real assets through renewal, modernization and reconstruction.

The resolution of these and other tasks should lead to an increase in labor productivity, an improvement in the quality of operations and an economizing of material, labor and fuel-and-power resources.

It is noteworthy that the Intensification-90 program includes the types of equipment and progressive technology that at the time of their assimilation and production should be, according to technical and economic indicators, no lower than the world or leading domestic level and should be marketable. It is oriented toward the broad utilization of the results of basic and applied research, the most important inventions and discoveries, and leading foreign and domestic experience.

More than 200 organizations and 65 ministries and departments took part in developing the program, proposals that came in during the course of discussion of the Fundamental Areas of Economic and Social Development of the USSR for 1986-90 and for the Period to the Year 2000 were taken into account, and the essential measures for fulfilling the long-term national-economic programs--the Food and Energy programs, those for consumer goods and services and the Comprehensive Program of Scientific and Technical Progress for 1986-2005--have been envisaged.

Thus, the republic Intensification-90 territorial and sectorial program is a direct, specific, planned document that envisages the solution of a group of problems and tasks of intensification that are interconnected by resources, executors and time periods.

The contents of the sections of the program include: the level reached, trends and unresolved problems of the national economy in the initial period,



the aims of the intensification of economic sectors, and the principal areas and most important measures that provide for the forward development of the economy, as well as the resources essential for the fulfillment of the program tasks and the anticipated economic and social results.

It is essential to note that the program permits the expansion of opportunities for a fuller accounting of not only sectorial, but also territorial interests. With this aim, the coordination of ministry proposals with existing resources is envisaged, which should lead to a balance both vertically (Gosplan--ministry--enterprise) and horizontally (oblast planning--city planning--rayon planning organs--enterprise).

The given system predetermines the organizational structure and precise control of the process of fulfilling the many program tasks.

The structure of the Intensification-90 program, aside from the composite plan for Kazakhstan, includes the section "Intensification in the Sectors of the National Economy of the Republic" (science and scientific support, industry, the construction complex, transportation, communications, services and urban management). It also includes the sections "Program Resources Supply" and "Scientific and Technical Dedicated Comprehensive Programs" (13 programs in all).

The program encompasses the coordination of the actions of the whole planning circles of the sectors of the national economy of the republic, the major portion of union enterprises and more than 120 scientific research and planning and design subdivisions of Kazakhstan, that is, more than half of our scientific and design potential.

Of the 6,200 principal scientific and technical measures included in the program, union enterprises should realize 2,700, and the rest are in the sectors of planning circles, including more than 2,000 in the republic's economy. This is a very large amount of operations, if it is taken into account that in the KaSSR Council of Ministers circle alone, about 940 shops and sections will be comprehensively mechanized and more than 780 mechanized, flow and automated lines will be incorporated. Some 220 ASUs [management automated systems], including 64 ASTUP [automated systems for the control of technological processes], are projected to be incorporated.

Expenditures for the principal tasks of the program will total more than 6.8 billion rubles by the end of the five-year plan, of which about 300 million rubles are envisaged for scientific research.

The realization of the program tasks will make it possible to ensure in the 12th Five-Year Plan: steady average annual growth rates in labor productivity of no less than 3.6 percent, and 19 percent overall for the five-year plan; a reduction in product cost of 2.5-3 percent, or 0.5-0.6 percent a year; a reduction in product materials consumption (unamortized) of 4.9 percent, or almost 1 percent a year; a reduction in the use of manual labor from 33 to 27 percent; and, an improvement in the working conditions for the laborers.

It is very important that 88 percent of the increase in national income will be provided for through growth in the productivity of social labor.

An economic saving of more than 2.3 billion rubles for the national economy will be obtained from the incorporation of all of the program's targets and measures. A saving of 1.5 billion rubles is planned from reductions in product cost. The theoretical freeing up of about 418,000 people is projected in the area of production.

The following numbers are also of interest: an absolute reduction in the number of workers employed in manual labor of 240,000 and more is anticipated, including more than 95,000 people employed in working in heavy and harmful labor conditions.

The solution of ecological problems does not remain in last place. Thus, the incorporation of environmental protection measures will make it possible to obtain considerable social and economic benefits: the amount of emissions of harmful substances into the atmosphere will be reduced by 208,000 tons a year, and the dumping of polluted sewage will decline by 39 million cubic meters a year.

The principal expenditures--three fourths of the total value--will go to the "Industry" sector, which is wholly consistent: it includes 5,600 measures for the machine-building, ferrous and non-ferrous metallurgy, electric-power, chemical and petrochemical, petroleum-refining and coal industries, as well as sectors producing consumer goods.

All in all for the five-year plan, the comprehensive mechanization and automation of 4 types of production and 780 shops and sections is planned along with the installation of more than 500 mechanized and automated lines, 58 robot units and 510 industrial robots and manipulators and the incorporation of a number of flexible automated types of production.

The economic saving from the realization of the scientific and technical measures in industry will total more than 1 billion rubles.

The average annual growth rate of consumer products will reach 4.3 percent, wherein more than three fourths of the increase in production volumes will be obtained through the growth of labor productivity, that is, intensive factors. The share of industrial products in the total volume of the gross social product will increase by 8 percent and will total 60 percent by 1990. Expenditures per ruble of commodity output in industrial production will decline by 3.7 percent, and materials expenditures by 5 percent, over the five-year plan.

Allocations directed toward the reconstruction and retooling of industrial sectors will increase. In the KaSSR Minlesprom [Ministry of the Timber and Wood Processing Industry], for example, the reproductive structure of capital investment will look thus at the end of the five-year plan: 38 percent--for new construction, 2 percent--for expansion, and 60 percent--for technical retooling. The relationship overall is analogous for the group of industries

that produces consumer goods, where the share of expenditures for technical retooling will total more than 55 percent on average over the five-year plan.

It should be noted that the real assets of fixed productive capital will increase: by the beginning of 1990, they will total more than half of the overall amount of fixed productive capital in industry.

Especial attention is devoted to the output of consumer goods. Over the five-year plan, their output will increase by a third, including by 60 percent at union enterprises. New sections and shops are projected to be placed in operation for this purpose. The expansion of the production of complex domestic appliances at machine-building enterprises is envisaged. The output of domestic chemical products will increase by more than 70 percent.

Notwithstanding the fact that the program lacks an independent section on product quality, the incorporation of measures for raising the technical level of production nonetheless permits a near half-again increase in the output of products with state quality indicators. The proportion of high-quality articles among the total amount of products subject to certification will surpass 50 percent by the end of the five-year plan (compared to 37 percent in 1985).

The incorporation of scientific and technical innovations in the sectors of the agro-industrial complex will ensure an economic saving of more than 500 million rubles and an economy of more than 158 million rubles from cost reductions. The theoretical freeing up of about 75,000 people is projected along with a substantial reduction in the share of manual labor.

Overall, the republic agro-industrial complex will produce an increase of 1.9 billion rubles in product volume. In agriculture, in particular, 16 new highly productive types of grains and 8 new types of fodder will be bred and delivered to state strain testing. Their incorporation will ensure an additional yield of 2-5 quintals per hectare of winter grains, 1.5-2 of spring wheat, 2-3 of barley, 4-5 of corn and 5-7 of soybeans. The sectors of the agro-industrial complex will assimilate 114 new types of product in a sum total of 600 million rubles over the five-year plan.

Progressive technology will be widely employed. Crops covering 12 million hectares in area will be cultivated using it, including 5.6 million hectares of grains. Existing technologies will be improved and new ones developed and incorporated for improving and utilizing natural crop lands, and a system of sown pastures will be created.

Substantial changes will occur in the construction complex, where the realization of 137 major program measures is envisaged. This will provide an annual growth in the volume of construction commodity output of 3.3 percent. Labor productivity will be raised by more than 19 percent, and the economic saving from product cost reductions will total more than 100 million rubles. The entire additional requirement for timber, thermal power and cement, as well as 78 percent of that for rolled ferrous metal, will be covered through the economizing of resources.



A growth in freight traffic of 21-23 billion ton-kilometers is anticipated in the transportation complex. Almost half of the total increase in labor productivity will be achieved through scientific and technical measures. This is equivalent to the theoretical freeing up of more than 35,000 people. About 90 percent of the total amount of capital investment will be directed toward the reconstruction, expansion and technical retooling of transportation.

Much is envisaged to be done for the comprehensive mechanization of production processes at 120 central enterprises, shops and sections of the postal system. The full automation of telephone stations will be completed. Steps will be undertaken to raise the reliability and expand the coverage of the population with television and radio broadcasting. Almost half of all capital investment in the development of communications will also be directed toward reconstruction and technical retooling.

The program for the development of urban management and public services is extensive. The volume of services per resident of the republic will increase by more than 1.3 times.

Health-care services for the population, trade and public catering and all types of passenger transport should be improved substantially.

The Intensification-90 program has a special section for science and scientific support. The strengthening of basic and applied research of a technical nature will permit a substantial increase in the return on the scientific potential of the republic. An economic saving of more than 800 million rubles will be ensured from the incorporation of the developments of scientific research institutes (and there are more than 120 of them in the republic) into production.

The creation of 3 scientific and technical complexes and 8 scientific and technical associations in the republic is projected in order to strengthen the links of science with production. Questions of creating engineering centers and economically accountable organizations for the incorporation of developments are being studied.

Intensification-90 devotes especial attention to the utmost conservation of material, financial and labor resources. The corresponding indicators for labor, financial and resource supply for each complex have been determined. A considerable increase in the extent of utilization of secondary resources is projected: the use of ferrous-metal scrap will increase by 63 percent, ash and shale by 3.8 times and timber-industry by-products by 1.5 times.

Calculations show that the 12th Five-Year Plan should be a turning point in the transfer of the economy onto the rails of intensification. The share of intensive factors will quadruple compared to the 11th Five-Year Plan.

A distinguishing feature of the Intensification-90 program is the fact that all of the expenditures and resources for its realization fall under the expenditure and resource limits allocated yearly by the republic. It differs radically from other programs in that it analyzes in an all-round manner the effect of measures for accelerating scientific and technical progress on the



factors of production intensification with an investigation of the reproductive structure of fixed capital and the capital-labor ratio, return on investment, and increases in output and labor productivity.

The ministries, departments, production associations and enterprises must once again carefully verify whether the targets and measures of the Intensification-90 program are included in the five-year and yearly plans and whether the material and technical, labor and financial resources for their realization are envisaged in them. The time has come for the organization of systematic monitoring of the course of fulfillment of every stage of the program, when it is essential to "transform the power of ideas into the power of actions." This precise thought of CPSU Central Committee General Secretary Comrade M. S. Gorbachev, expressed at the 27th Party Congress, should be the chief direction of our work.

It is also necessary to keep in mind the circumstance that the realization of the Intensification-90 program lays the foundation for future work on developing the economy of the republic in the 13th and subsequent five-year plans.

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